

The NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO
THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

VOLUME X

AUGUST, 1932

NUMBER 2

Wherein So Many School Executives Come to Grief

*The wise superintendent who is new to his position
will not be precipitate in unloading his training on
his fellows but will wait until his advice is sought*

By CARTER ALEXANDER, Professor of Education, Teachers College, Columbia University

TOO many highly professionally trained school executives for a time come to grief in the field. The cause is simple. They unload their training on their fellow school men too early. It is a pity that they do not use the methods of their wiser brethren. The wiser ones wait until the psychological moment. If the others could but learn to wait they would have much greater success, or would attain their success years earlier.

The professionally trained school executive is subject to a great temptation. He has a much better command of educational theory than most of the others around him. He has a wider view of education. He has given definite thought to the best modern practices and he has a clearer view of what education is likely to be five, ten or twenty years hence. He has a better assortment of educational practices and devices in his professional equipment. It takes a strong and a wise man to resist the temptation to unload all these things quickly on school men who have not had his professional advantages.

The school men and citizens whom the trained professional school executive encounters in the field are always aware of his potential superiority. They may not be as aware of it as he is, but they know it just the same. The mere vagueness of their feeling tends to make them resentful. The simplest

explanation, of course, is the trite "inferiority complex." This makes them expect that the executive will have a know-it-all attitude and seize every opportunity to lord it over them and to introduce startling changes and benefits in the manner of an aggressive missionary working with an inferior race.

A pathetically large number of otherwise capable, trained school executives do not seem to be able to wait. They promptly live up to all the unfortunate expectations of the field and have trouble accordingly. Every experienced school man can call up many such examples. Two occur offhand to me.

Some years ago, a highly trained man of unusual native ability was brought in from another state as assistant superintendent in one of the important cities. At the first meeting of the state city superintendents' association, someone as a matter of courtesy asked if he had any remarks to make. With a masterly stride, he hastened to the platform, and pulled out a long manuscript in which he proceeded to tell the school men of that state how little they knew about the school problems under discussion as compared with a trained man like himself. Again, a young research director, who was about as well trained professionally as his superintendent, could not wait. He announced at his boarding house and elsewhere that he was an

efficiency expert for the school system and that there was no job in the schools that he was not competent to fill, including the superintendent's place.

It took the first of these men several years to live down his initial bad impression on the school men of the state. The second was retained in the school system only by the strenuous efforts of the big-hearted superintendent of schools, for whom originally he apparently had a kind of boyish pity.

An Interesting Contrast

It is interesting to compare such cases with the methods of work used by professionally trained men who make their training count. At the same meeting in which the young assistant superintendent got off on the wrong foot, there was present a city superintendent of national reputation who had recently come to the state. He too was called upon to speak. But he only arose, expressed his appreciation of the chance to meet the school men, and modestly stated that he had not been in the state long enough to study the educational problems adequately. He felt that he would need at least a year for such study, and he hoped to be able to speak to some profit at the next annual meeting. As a result, he had everybody's good will and a year later was an acknowledged leader in the state.

The superintendent with the young research director used similar methods. Several years before, he had taken this suburban superintendency in a region where there was marked hostility from school men against a superintendent of his training, particularly against one from the institution in which he had been trained. From the start he met coldness and suspicion. School men would greet him with jibes, expecting him to lay down the latest educational doctrines for them. They would sarcastically ask his advice. During this early period, he always said he did not know the problems well enough to be able to offer advice. He admitted that he had taken pains to acquire the best professional training obtainable, and had practically completed the doctor's degree. But he affirmed that he could use his training for the benefit of practical problems only after he had had time enough to study those problems so as to know what they really were.

He stated that he would need a lot of help on practical problems from the regional school men, particularly as he had come from a distant state where educational conditions and regulations were markedly different. When he had mastered the local situation enough to be sure of his ground, he gave help whenever it was asked for, but did not volunteer suggestions. By that time the local school men liked him so well and had so much con-

fidence in him, that they accepted him and would ask him on many problems for the help that they knew he could give and that no other one of their number could. As a result, within three years, he was elected to the presidency of the regional school men's association, his rightful position of educational leadership, but an unheard of thing in that conservative organization.

The four illustrations given are typical of many others. If anything, the two younger men had better professional training than the two superintendents. But the latter were wise enough to wait until the right time to unload this training on their fellow school executives. They consequently obtained even greater and much earlier opportunities to share their training with their less fortunate associates than the impatient younger men who tried to grasp and missed.

How Kansas Saves Its Pupils' Money for School Books

In 1915, the Kansas legislature authorized the state to have printed at the state printing plant such texts as the school book commission deemed it wise and advisable to have printed at state expense.

According to George A. Allen, Jr., superintendent of public instruction, the number of books so printed has greatly increased during the sixteen years since the law was enacted, until today practically all the texts used in the elementary schools, over forty in number, are printed by the state at a decided saving to those who have to purchase school books.

Further than that, several high school texts used in larger quantities than some others in use in the high schools are also printed at the state printing plant, and also sold more cheaply to pupils than if the same texts were purchased from the regular publishers.

"On the whole, state publication enables the school children of the state to purchase their books from 20 to 30 per cent cheaper than if purchased from the publishers themselves," Mr. Allen holds. "Hence, without question state publication of schoolbooks effects a considerable saving to the parents of the school children of the state.

"Two things, however, must be borne in mind. One is that nothing else can compensate for quality in the subject matter of the texts adopted. The second matter considered is that a large edition of any text must be required in order for state publication to supply the books at a lower cost than they could be sold by the regular publishers."

Wanted for Vocational Education: A Basic Philosophy



Why cannot the general educator and the vocational educator cease wrangling, asks the layman, and agree on a program that will serve every child according to his individual abilities?

By BENJAMIN HENRY VAN OOT, Ph.D., State Supervisor of Trade and Industrial Education, Richmond, Va.

THERE are three mounds in the educational arena. On the top of one mound stands the general educator and on another stands the vocational educator, each expounding to the world the virtues of his own program and each realizing that there is lacking a basic philosophy of education, which, if present, would unite the two schools of thought into one harmonious whole.

The general educator looks with some degree of envy at the special federal appropriations that support the program of his associate educator and argues that the federal government ought to treat all forms of education with equal generosity. He objects to what he calls government control of special forms of education and reports to the President that Uncle Sam should hand out doles to the states to be spent in such manner as is deemed advisable by the states without auditing, supervision or any form of control.

The vocational educator, on the other hand, while appreciative of the aims, objectives and methods employed by his friend in the field of general education, looks back over the hundreds of years in which the general educator has had to include vocational education in his educational program and views the results with a sardonic smile. He does not object to the general educator's getting as much financial assistance from Uncle Sam as the old gentleman is willing to give, but he does wonder if the numerous attempts in the past to tap the Uncle's pocketbook have not been made because of a lack of unanimity of aims and objectives on the part of those who are in charge of the general education program. He wonders, too, if the general educator has not neglected to provide a type of education that would have met the needs of the millions of children who never went to college. Somehow or other he is suspicious of the cry of states' rights

which his friends in the field of general education have revived.

Between these two is a third mound on which stands the average layman, curious as to what the whole wrangle is about. He is alternately amused and provoked at the arguments presented by both educators and wants them to come down from their high positions with him into the plains below, there to decide upon some basic philosophy so that all three may climb the educational slopes together and in harmony. He is not greatly concerned about "federal control" because it is his conviction that the chief objective of education is to educate and it makes little difference whether the support comes from the federal government or from the local citizens. He cannot see as much interference from the government in the program of vocational education as he sees from the several accrediting agencies, such as the North Central Association and the Southern Association of Secondary Schools and Colleges, which prescribe what shall or shall not be considered acceptable standards in high schools or who shall or shall not teach in these schools. In fact, he feels that if there is any federal control of vocational education it is of a kind that compels the local communities, if they use federal funds, to set up an educational program that will meet the immediate needs of the persons residing in these communities instead of blindly following the educational prescriptions of an organized group of colleges whose chief aim is to use the local school systems as a means of sifting out desirable collegiate raw material.

Educational System Is Confusing

He is not especially interested in whether or not the construction of a doll house or a candlestick is vocational education, despite the fact that some general educators claim it is while vocational educators claim it isn't. He is mystified over the whole thing. He looks over a state plan for vocational education and wonders why the teaching of bread making, for instance, is an evening school subject when taught after six o'clock in the evening to restaurant cooks, but becomes a general continuation school subject when taught before six o'clock to factory girls. He asks himself why it becomes a home economics subject when taught to high school girls, a trade extension subject when taught to cooks during the daytime and an evening home economics subject when taught at night to housewives. Why does it carry college credit when taught to women who are preparing to teach and yet fail to carry college credit when taught to factory girls, cooks or housewives, all of whom probably bake better bread than the girl who gets college credit for baking bread?

He is told by the general educator that the pupil cannot get college credit for baking bread because the North Central Association says that she cannot get this credit until she has had sixteen units in Latin or French or English or mathematics or science. He listens to the vocational educator and is told that the distinctions are made upon the classifications of occupations and not upon the subjects taught. He nods and agrees but in his subconscious mind he is saying, "*cetera desunt*." He wonders, too, why each of these types of classes must be paid for from separate funds when to him bread making is bread making, no matter who does it.

What the Layman Wants

The layman becomes puzzled when he hears the educators discuss the virtues and objectives of industrial arts, manual arts, manual training, home economics, vocational guidance, vocational education, general shops, continuation schools, trade schools, day unit classes, trade preparatory and trade extension schools. They all mean about one and the same thing to him. He sees the vocational objective as one of the seven cardinal principles as set forth by a learned group of educators and wonders if this applies to the butcher, the baker and the candlestick maker, or whether it includes only those who are fortunate enough economically and socially to sip from the fountain of college training. In fact, he wonders whether even college education is vocational training when he sees so many college graduates unable to do anything that fits them to take their places in the practical world about them.

The layman hears the general educators talk about tests and measurements to determine general intelligence, mechanical aptitudes and personality as factors that contribute toward success in life, and he wonders why these educators say that he and only he has general intelligence, personality or mechanical aptitude who can tie a string to another's finger, put a cross in a circle and not in a square, state the opposite of a number of words, insert a number of deleted words in sentences, indicate whether or not alliteration is a form of pentameter, show whether cessation of belligerency is ever desirable, tell whether or not he is having a good time when he sees a mouse in a trap, manipulate certain educational hardware, assemble blocks or tell whether or not he laughs easily or has ever had convulsions! At the same time he reads in the latest federal board bulletin that actual mechanical ability in a large industry correlates only .0551 with general intelligence as measured by an accepted standard test; .3118 with mechanical aptitude as measured one way and —.1202 as

measured another way; .1523 with age above sixteen and only .0654 with the amount of schooling a person has had. He reads that when all these traits are combined there is a multiple correlation of only .38. He does not know exactly what this means, but he does know enough to understand that the relationship between mechanical ability and this thing general educators are calling general intelligence is mighty small.

Having been brought up in a democratic society,

ness, the children of today taking for granted the things that older persons are considering the wonders of the age—the radio, the automobile, the airplane, the helicopter, television, the telephone, photographs sent by wire, plant food plucked from the air, ships made of concrete and steel, ice made from gas, "silk" stockings and dresses made from trees, paper made from corn stalks, colored talking pictures in three dimensions, dyes which outdo the colors of nature, oil, coal and gas to heat our homes,



Making model airplanes not only develops the pupils' mechanical skill but also engenders in them a deep interest in this important new means of transportation.

the layman wants the general educator and the vocational educator to descend with him into the valley between the three mounds and to agree upon some program that will permit all three to ascend together. He wants a philosophy of education that will be fair to all alike, void of favoritism and exploitation and stripped of all hairsplitting nomenclature and false objectives. He wants his children to receive a type of education that will cultivate to the highest degree every potentiality they possess, whether that ability lies in the realm of art, science, literature, mechanics or in playing the saxophone. He realizes that his children, and the children of other people, are living in an age of science and invention, of art and music, of politics and religion, of literature and many forms of entertainment.

He sees, with Merle Thorpe, of the *Nation's Busi-*

natural and manufactured ice, electric refrigeration and gas refrigeration to cool them, rubber discs to preserve the voices of artists, paper driving wheels of locomotives, asbestos shingles and canned pie crusts and biscuits.

The Wonders of the Age

He sees about him machines of all kinds, machines to heat, light, cool and ventilate the house, machines to sew, to cook, to keep time, to take and to show pictures, to dig ditches and pave streets and invisible motion picture apparatus to catch burglars. He sees machines to measure the smoothness of railroads, to put news into type and to write letters direct from the telegraph wires, machines to spray cement and mend stockings, to measure a billionth of an inch, to measure earthquakes, to freeze fire, to identify delicate tints for the color

blind, to grade cotton, to provide secrecy in radio speech, to make diamonds, shoes, cigarettes, clothes, and machines to make machines that will hear light and see sound.

He observes mail order houses open local stores, department stores unite into groups, jobbers giving their financial life blood to retail customers in order to keep them on the firing line of competition, chains combine with chains. He sees going concerns revise and amend traditional methods in order to keep going; he is witness to the whole system of distribution in a state of flux and ferment and great economic currents sweeping across the land, cutting new channels. He sees commercial houses of a century's standing destroyed with bewildering suddenness and watches infant enterprises become national institutions overnight.

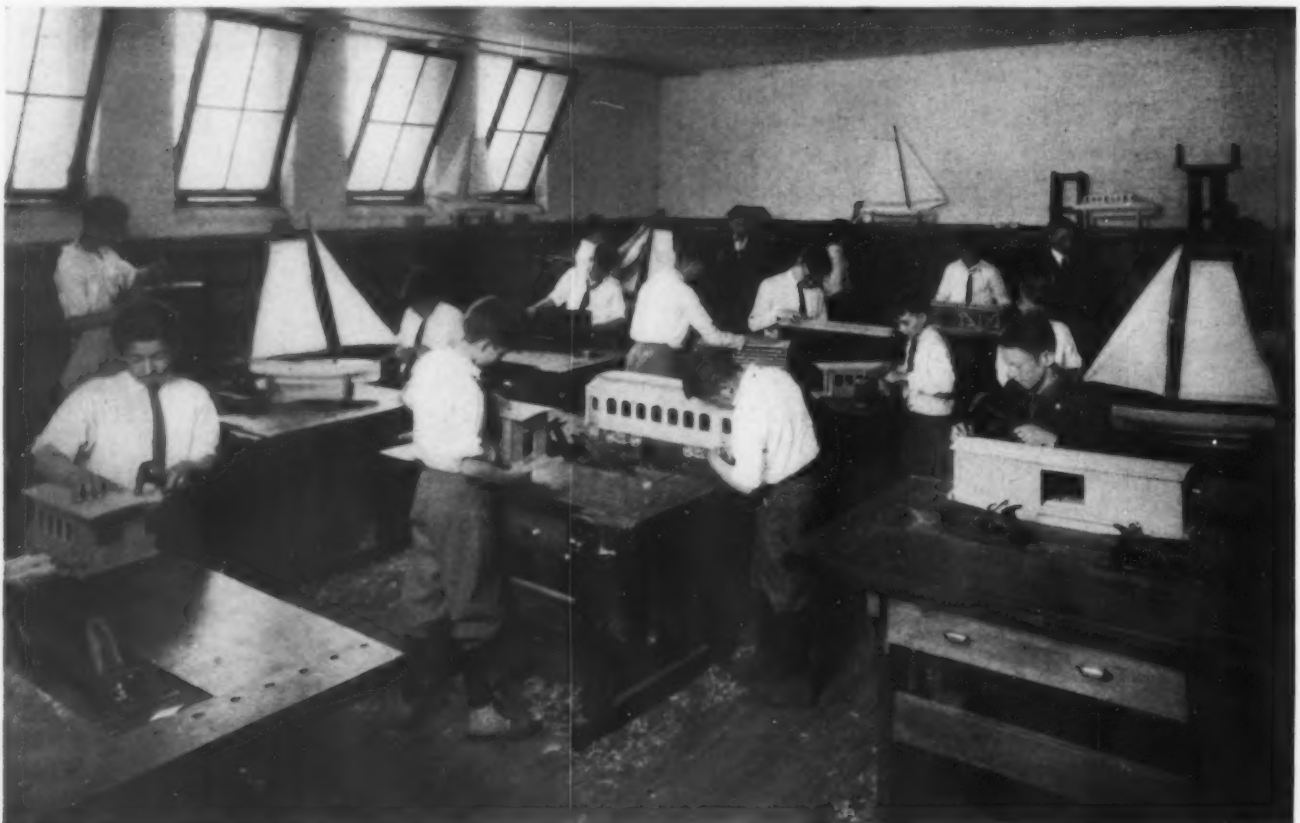
"The Only Permanent Thing Is Change"

He sees these and many more, and he cannot understand why otherwise intelligent educators should squabble over insignificant differences. He wonders why his children are spending their time learning the names of mountain ranges in Australia, why Xerxes crossed the Hellespont or who were Napoleon's maiden aunts, instead of becoming informed on more vital factors. He is living in a dynamic society where the only permanent thing is change. He realizes that somehow or other his

children will have to find some niche in society into which they can fit comfortably and where they can work profitably, and he knows that through studying present day forces and factors his children will be better prepared to compete with their fellows in this dynamic world of things. At the same time they can learn all the factual matter which his friend the general educator says is so necessary for their cultural background.

Children Need Contact With Industrial Arts

What do his children know about the world of things about them? Underlying everything they see, touch, or taste or smell, there is a world of science, of mathematics, of literature, of art, of economics, of social problems. He asks the educator if these things may not in some way be taught to his children, even in an elementary form, before they have to leave school and enter the workaday world. He has heard someone say that only 30 per cent of the children ever get as far as high school and wonders if it is not possible for the elementary schools to bring his children into contact with some of these industrial arts. Yes—that's the word—industrial arts. The study of the arts of industry in which children in the grades may be taught to make things illustrative of the great forces that are shaping our destinies and, while making these things, to learn their uses, their prop-



These boys are not "just making things"; they are studying the history of transportation and through industrial art classes are gaining a knowledge of science, mathematics and mechanics.



In the day unit class in machine shop practice, the pupils at John Marshall High School, Richmond, Va., are prepared for skilled mechanical work as well as higher executive positions.

erties, their sources, their avenues of production and distribution, their economics, their art values, their contribution to science and society, their places in the world about them. Surely, he says, there will be no squabble between educators if the industrial arts are taught in the elementary school. Such a subject is not vocational, but it would give his children valuable information that they could apply in no matter what vocations they found themselves in after life.

Refuse to Live in the Past

The layman sees the children of adolescent age asserting themselves as members of society. They want to go places and do things. They want to become a part of present day society, not to live in the past, however interesting that may have been and no matter what valuable lessons the present generation may learn from the past. Some are too young to make a choice of a life's work. Some are moved by ideals and aspirations, others by instincts and appetites. Some are forward and show initiative; others are reticent and hold back. Some

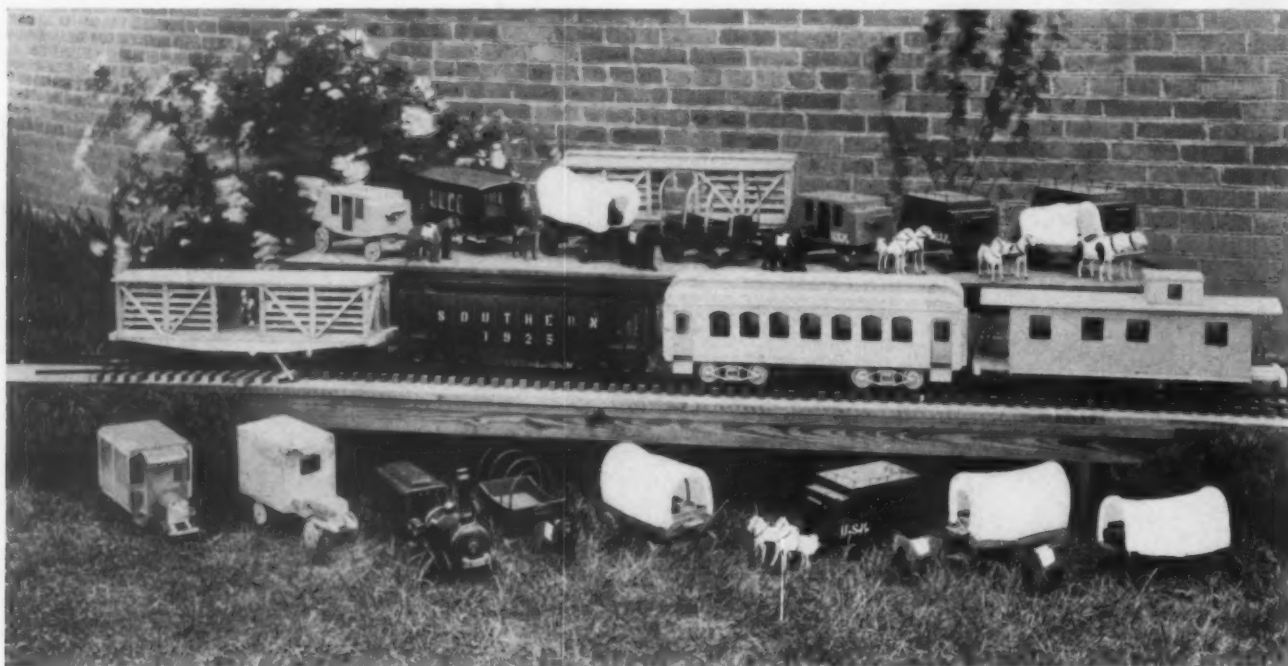
learn quickly through the use of books and magazines; others gain knowledge through their creative abilities.

The layman visualizes for these children a sort of general shop of a nonvocational nature in which children of early adolescence may give expression to any mechanical and scientific inclinations they may possess. To develop skills? Yes. He realizes that the future surgeons, dentists, engineers and other professional men will need accurate motor coordinations in the practice of their vocations as much as the future carpenters, plumbers or electricians. To develop attitudes and appreciations? Yes. No matter what vocation a person enters, the proper attitudes toward mechanics, toward science, toward art products and a proper appreciation of materials and processes and mechanical principles will make life more worth living.

The layman cannot understand why the educators would object to the state or federal government setting up a few trade, business or agriculture schools for the benefit of those boys and girls who have sense enough to see that within a few

years they will have to earn a living for themselves. He argues that these schools should serve a wide area so that the graduates will not flood the labor market and so that the persons enrolled therein shall be of a type that will not only be acceptable to the employers but will also be creditable representatives of skilled labor. He points out that these graduates will migrate to all quarters of the

sage of the national vocational act. If he had, he would have found the evidence of tremendous wastes in public funds due to students dropping out of classes or to the ineffectiveness of the instruction when men who were not familiar with the requirements of the trade were being taught alongside of those who were. He might have found also that teaching men new trades in evening



This picture might well be called a history of transportation, for the models made by the pupils depict all sorts of conveyances, from the ox cart and covered wagons of pioneer days to the modern railway train and trucks.

nation and, therefore, the expenses of training them should be shared by the state and federal government alike.

The layman is noticeably concerned about vocational training after persons enter employment. He sees night schools, part-time schools, continuation schools, opportunity schools and other types of schools that have as their direct objective the teaching of those skills and knowledge that will enable workers to perform their work more efficiently, to prepare themselves for higher types of work or to continue their general education. He is not greatly interested in where the money that supports the classes comes from, but he is interested in seeing that a good job is done. He cannot see why federal funds may be used to support a class in arithmetic but cannot be used to support a class in English, or why a person who has no trade may not learn one in an evening school supported in part by federal funds. Neither can he see why men following two or more trades may not be enrolled in the same class.

In these respects, of course, he has not studied the effects of mixing classes in states where vocational courses were in operation prior to the pas-

sage of the national vocational act. If he had, he would have found the evidence of tremendous wastes in public funds due to students dropping out of classes or to the ineffectiveness of the instruction when men who were not familiar with the requirements of the trade were being taught alongside of those who were. He might have found also that teaching men new trades in evening

Why We Need Vocational Education

The layman sees the economic and social values accruing from a well rounded program of vocational education that will enable the worker to earn wages that will provide a balance in his pay envelope after the necessities of life are provided. Unless there is this balance, he argues, the worker cannot pay the rent or taxes, own his own home, buy the insurance and luxuries enjoyed by those who are more fortunate economically, buy books and magazines or send his children to school. He argues that unless wealth is created through education and training, the general educator is going to find considerable difficulty in finding the necessary money with which to run his schools. He cannot justify the claims of general educators that all the money obtained for schools should be used to teach the three R's; nor can he see why high schools and colleges should be supported when little or no attempt is made to educate and train the workers who create the wealth that supports the schools.

Neither is he particularly interested in the camel theory of education which develops a sort of educational hump composed of factual material that may be tapped whenever a person needs a special item of information.

Rather, he believes that the world today is sufficiently supplied with practical, dynamic problems that should challenge the keenest of intellects and that, while solving these problems or learning present day facts, the pupil will be confronted with additional problems that require an understanding and mastery of the historical, social, economic, literary and even mathematical background responsible for the present day problems or conditions. Solving these present day problems and studying present day conditions only intensify the interest of pupils in those sciences, arts, philosophies and social and economic problems which the general educator is now teaching as factual material, isolated from anything that comes within the range of pupils' interests or experiences.

Time Changes Vocational Subjects

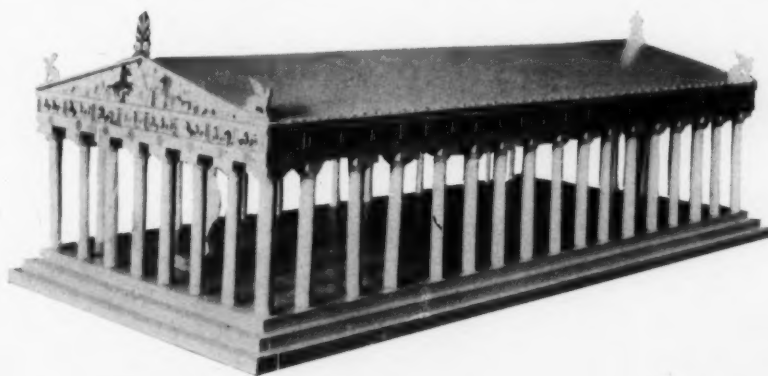
The layman realizes that much of the material now being taught as factual or cultural material was the vocational education of years ago. He points out that when America was a maritime nation lying along the Atlantic seaboard, it was necessary for the persons who were engaged chiefly in commerce and navigation to know the names and locations of gulfs, bays, rivers and capes in order to carry on their vocations effectively. Now, the persons in these vocations need to know the railroads, the bus lines and, in the near future, the landing fields. He remarks that Latin, now a cultural study, was once a vocational subject in that it was necessary for students to read and speak Latin in order to have access to the literature pertaining to the vocations of law, medicine, letters and the ministry. Naturally, he argues that a basic philosophy of vocational education should be based upon an analysis of what a vocation requires. He does not object to the study of art for art's sake, of culture for culture's sake or of history for the

sake of appreciation for those who wish to study these subjects with these objectives in mind. He simply argues that these subjects may be made more vital, more interesting and more meaningful if they are based upon problems or situations that challenge the attention of students. He is opposed to the teaching of the vocational subjects of centuries ago as the cultural education of the present generation.

Layman Wants to Cooperate

The layman is willing to cooperate with both the general and the vocational educator. He is willing to have himself taxed to provide the finances that will support their programs provided he sees that they agree and each knows where he is going. He is enthusiastic about any educational programs that will bring his children to a full realization of the problems of life. He does not want them exploited or trained too early in any special vocation unless conditions warrant such training.

He sees in industrial arts in the elementary school a means of bringing to children a realization of the problems of everyday life, at the same time making the other subjects the children are studying more vital and interesting through close correlation. He sees a sort of general shop for the junior and senior high schools where boys and girls may learn skills and acquire attitudes, appreciations and mental powers without specializing in any vocation. He sees trade schools which serve large areas of the state where boys and girls can leave their homes, if need be, for short periods of time to attend these schools in order to acquire short units of a given vocation and later return to their respective homes to practice these vocations. This, he says, will not crowd the trades. He sees evening and part-time schools for employed persons in every city. And, finally, he sees a system of college extension courses and teacher training courses to carry the higher forms of education to employed persons or to prepare laymen like himself to enter the field of industrial teaching. He wants to cooperate, but he wants first to be shown.



The Parthenon, in miniature, was made by an ancient history class of the Bellevue Junior High School, Richmond, Va.

How Arkansas Is Reorganizing Its High Schools

As a result of a comprehensive statewide school survey, Arkansas is taking definite steps to correct the errors in its high school curricula and to offer its teachers more effective preparation

By CRAWFORD GREENE, Superintendent of Schools, Blytheville, Ark.

ARKANSAS is in the midst of a five-year program of high school reorganization which was inaugurated in the fall of 1929 following a comprehensive survey of the high schools and teacher training institutions. The survey, sponsored by the General Education Board, was conducted by Dean William S. Taylor, University of Kentucky, assisted by M. R. Owen, Henry H. Hill and Dr. Howard A. Dawson, of the state department of education.

The survey resulted from a conviction on the part of J. P. Womack, at that time state superintendent of public instruction, that a number of the high schools, especially the smaller schools, were not being operated economically or on an educationally sound basis. The curriculum requirements of the state were rather flexible, and observation had shown that certain schools were offering too many subjects with the probability that many of them were not properly taught. In fact, the state had never attempted to develop a complete or unified program for its high schools. Certain minimum requirements had been set forth, with the rest of the curriculum optional.

It was noticed that there were too frequent

changes of the curriculum in some schools, and the suggestion was made that the subjects offered in many cases depended upon the whims of the principal rather than upon sound educational procedure. With frequent changes occurring it was realized that quite often teachers had to teach subjects in which they were not adequately prepared.

The survey covered the scholastic year of 1928-29 and was participated in by members of the state department of education, college faculty members and committees of school men, all working under the leadership of Dean Taylor. In order to secure an adequate picture of the entire high school situation upon which to base reorganization plans, data were assembled upon the following points: enrollment in different sizes of high schools according to the number of teachers employed; number of graduates of four-year high schools in 1927-28 in high schools of different sizes according to number of teachers employed; subjects taught in 1927-28 in high schools of different sizes and the number teaching each subject; number of units offered in high schools of different sizes; number and percentage of teachers teaching in specified number of fields; teaching combinations with Eng-

TABLE I—ENROLLMENT OF ARKANSAS HIGH SCHOOLS, 1928-29, ACCORDING TO SIZE OF SCHOOL AND NUMBER OF GRADUATES

Size of High School According to Number of Teachers	Number of Schools Reporting	Enrollment			Per Cent of Total Enroll- ment	Aver- age Enroll- ment	Graduates		
		Boys	Girls	Total			Boys	Girls	Total
One-teacher	89	804	1,012	1,816	5.9	20.6			
Two-teacher	93	1,585	1,713	3,298	10.6	35.5	151	214	365
Three-teacher	85	2,328	2,777	5,105	16.5	60.7	310	466	776
Four-teacher	35	1,413	1,584	2,997	9.7	83.2	217	274	491
Five-teacher	21	1,291	1,498	2,789	9.0	132.8	196	246	442
Six-teacher	13	912	1,123	2,035	6.6	156.5	128	203	331
Seven-teacher or more	33	5,937	6,961	12,898	41.7	390.9	952	1,246	2,198
Totals	369	14,270	16,668	30,938			1,954	2,649	4,603

TABLE II—DISTRIBUTION AND PERCENTAGE OF TEACHERS IN VARIOUS FIELDS IN ARKANSAS HIGH SCHOOLS, 1928-29, ACCORDING TO SIZE OF SCHOOLS

Size of Schools	Total No. of Teachers	One Field		Two Fields		Three Fields		Four Fields		Five Fields		Six Fields	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One-teacher	152	31	20	34	22	34	22	45	30	7	4	1	0.7
Two-teacher	251	50	20	81	32	68	27	35	14	15	6	2	0.8
Three-teacher	295	57	19	124	42	79	27	29	10	5	2	1	0.3
Four-teacher	173	57	33	72	46	36	21	5	2.9	2	1	1	0.6
Five-teacher	127	62	48	45	35	11	9	9	7				
Six-teacher	92	46	50	35	38	10	11	1	1				
Seven-teacher or more	433	310	72	99	23	20	5	3	0.7	1	0.2		
Totals	1,523	613	40.3	490	32.2	258	16.9	127	8.3	30	2.0	5	0.3

lish; teaching combinations with science; teaching combinations with social science; teaching combinations with mathematics; science taught in 1927-28 high schools of different sizes and the number of teachers teaching; total number of teachers who taught given subjects and number who taught given subjects only; professional courses taken by teachers in secondary schools of Arkansas; semester hours of preparation in subjects taught in high schools of Arkansas in 1928-29 by graduates of colleges of Arkansas in 1928; number of fields in which graduates of 1928 were prepared to teach, number of fields taught in which they were prepared, and number of fields taught in which they were not prepared; number of graduates of colleges in Arkansas (1928) who taught in schools of given sizes in 1928-29; professional courses taken by graduates of Arkansas colleges who are now teaching in the secondary schools of the state.

This and certain supplementary information presented in a definite form the high school situation in the state.¹

The situation may be summarized as follows: Arkansas high schools are chiefly small schools. They graduate only a small percentage of their enrollment. Too wide a variety of subjects is offered by the smaller schools. The graduates of the teacher training institutions are called upon to teach subjects for which they have not been prepared. The teachers are required to teach in too many fields. There is no way of predicting what subject combinations a teacher will have.

Arkansas may be called a sparsely settled state, comparatively speaking, its area being 53,335 square miles, while the population in 1920 was 1,752,204, an average of thirty-three persons per square mile. Naturally, the development of a high school system has caused the creation of numerous small schools. The condition of the highways in

the past has encouraged this arrangement but at the present time the system is being rapidly expanded, thus allowing for greater consolidation of schools in the future. The distribution of schools by size was as follows:

Size of School	No.
One-teacher	89
Two-teacher	93
Three-teacher	85
Four-teacher	35
Five-teacher	21
Six-teacher	13
Seven-teacher or more.....	33
Total.....	369

The typical school was one with three teachers, with an enrollment of approximately sixty pupils, more girls than boys, in a small village. Table I shows the enrollment in the various types of schools in 1928-29 and the number of graduates from each type of school. The schools graduated 4,603 pupils, or less than 12 per cent of the total enrollment of 30,938. This percentage is rather small and seems to indicate a lack of holding power. No attempt was made to analyze the cause, yet one large contributing factor must be the shifting population of tenant farmers and oil field workers.

Superintendent Womack's observations were substantiated by the data obtained as to the range of different subjects taught in the various schools, especially the smaller ones. The distribution of subjects according to the size of the school was as follows:

Size of School	Different Subjects Taught
One-teacher	27
Two-teacher	32
Three-teacher	30
Four-teacher	29
Five-teacher	32
Six-teacher	30
Seven-teacher or more.....	39

¹The data in this article were taken from a résumé of the survey supplied the author by Henry H. Hill, state high school supervisor, and from the official bulletin of the state department of education.

An examination of these data shows at once the need for a definite and concise program for the smaller schools in the light of teacher training conditions. A prospective teacher in a small high school had no way of anticipating his future needs in the planning of his college course and the result, as actual data showed, was that he was not always prepared to teach the subjects he offered. An analysis of the different curricula showed that all of the one-teacher schools offered English and algebra; that 71 taught plane geometry, 40 general science, 37 community civics, 24 Latin, 23 agriculture, 23 occupations, 22 commercial or industrial geography, 20 physiology and 18 physical geography. The other 15 subjects occurred from one to eight times.

What a One-Teacher High School Required

The teacher in a one-teacher high school was sure of teaching English and algebra, with the teaching of history and plane geometry almost a certainty and with about an even chance of being required to offer general science and community civics. The situation showed only a slight improvement in the two-teacher and three-teacher schools.

Although the range of subjects in the one-teacher schools was large the individual schools did not have such a great range. Of the 89 schools, 69 offered eight units or less, 16 either nine or ten units, and 4 eleven or twelve units. As bad as this condition was, attention was called to the fact that Dr. Frank P. Bachman in his study of "Teacher Training in Southern State Universities" in 1924 found one-teacher high schools in other Southern states offering several more units than was the case in Arkansas. The same condition was true of the other smaller schools, the maximum units offered being 16, 20, 24, 26 and 28 for the two, three, four, five and six-teacher schools.

With the flexible curriculum that was permitted and with the lack of articulation of work in the teacher training school with field conditions, there was no certainty that the graduate of an institution would be prepared to teach in any particular school or that he would be allowed to teach the subjects for which he had made adequate preparation in college. In June, 1928, eight of the ten senior colleges graduated 156 students, who taught in the high schools of Arkansas during the following school year. Six of the seven junior colleges graduated 23 teachers for service. These 179 graduates taught 27 different subjects in their first year out of college. In 16 of these subjects the median number of hours of college training was zero. The only subjects for which the teachers were in any way prepared were English, general science, history and French.

In addition to being called upon to teach subjects for which they were not prepared the teachers were required to work in several fields. Table II shows the distribution of the 1,523 high school teachers by schools as to the number of fields in which they taught. It is seen that the one-teacher school is not the only offender in requiring its teachers to work in several fields. A total of 8.3 per cent of the teachers worked in four fields, while 2.3 per cent taught in more than four. Teaching in four fields should be permissible only in one-teacher schools.

A study of the teaching combinations of the teachers, the most frequent of which are shown in Table III, shows that almost every conceivable combination occurred. For example, 71 different combinations with social science were found, while mathematics was found in 79 distinct groupings. English was most frequently combined with social science and Latin in the one-subject combinations. The largest two-subject combinations with English were mathematics and social science, while science was added to form the largest three-subject combination with English, 42 teachers having this combination.

Within one field alone the range of combinations was remarkable. In science it was found that there were 56 different combinations. The teachers who taught in six different fields had such groupings as: science, mathematics, social science, Latin, psychology and commercial subjects; or science, English, social science, Latin, education and mathematics.

The state department of education recognizes 17 colleges in Arkansas for the training of teachers for secondary schools. Junior college graduates are granted three-year temporary professional certificates upon the basis of 12 semester hours of education and are permitted to teach in the smaller schools. Senior college graduates with 18 semester hours of professional work are given six-year certificates.

Wherein College Courses Are Lacking

As in the case of the high schools, the curricular offerings of the colleges show a wide diversification, especially in education. The colleges have followed no definite program in the extension of professional courses. The 179 graduates of 1928 previously mentioned had work in 26 different education courses, the frequencies in 13 of the courses being as follows: materials and methods (special methods) 126; high school and secondary education 92; principles of teaching 89; directed or practice teaching 87; general psychology 85; educational psychology 84; school administration, supervision or school management 75; tests and

measurements 63; history of education 57; observation and supervision of learning and teaching 57; elementary education 54; introduction to education 33; philosophy of education 22. None of the other 13 courses was elected by more than 17 persons. The report of this condition was concluded with the following recommendation:

"There are certain professional courses that are of greater worth in training a teacher than others.

center around three cooperating agencies, each of which was faced with certain definite tasks. The agencies were the teacher training institutions, the state department of education and the school executives.

The part of the teacher training institution was to develop a coordinated plan of professional training for their students, retaining those courses which best fitted their graduates for professional

TABLE III—FREQUENCIES OF CERTAIN COMBINATIONS TAUGHT BY TEACHERS IN ARKANSAS HIGH SCHOOLS, 1928-29

Chief Subject in Combination with	One Other Subject	Frequency	Two Other Subjects	Frequency	Three Other Subjects	Frequency
English	1. Social Science	82	Mathematics		Mathematics, Science,	
	2. Latin	29	and Social Science	35	and Social Science	42
Science	1. Mathematics	57	Mathematics		Mathematics, English,	
	2. Social Science	40	and Social Science	48	and Social Science	37
Social Science	1. Mathematics	58	Mathematics		Mathematics, English,	
	2. English	52	and Science	39	and Science	39
Mathematics	1. Science	51	Social Science and		English, Science,	
	2. Social Science	49	Science	45	and Social Science	40

There are many courses offered that are of little worth in the training of teachers. Of the 26 courses offered only five or six have real worth in the training of a high school teacher. The professional courses for high school teachers should be definitely prescribed. The department of education and the colleges should agree upon the courses in education that will be most helpful in the preparation of teachers in both junior and senior colleges. This will be far more economical for the colleges, far more satisfactory for the department of education and the effectiveness of the secondary program will be greatly increased."

According to Mr. Hill, "The reorganization plan recommended by Dean Taylor and worked out with the assistance of the colleges, the state department of education and the school executives has four main aims. First, teachers must teach in two fields only in order to ensure thoroughness. Second, teachers must be prepared to teach in the two fields in which they work. This requires setting up fewer teaching combinations, the development of definite high school curricula which utilize these combinations and the adoption of these by the school executives, that is, the superintendents, principals and school boards. Third, the quantity of subjects must be reduced and the quality improved. The job must be cut down so that it may be done thoroughly. Fourth, there must be an agreement as to the most worth while professional preparation for high school teachers to prevent the present haphazard preparation."

It was apparent that the remedial work would

work and eliminating the courses of little or doubtful value. Furthermore, they must train teachers thoroughly in two fields in accordance with the demand for teachers. The college authorities were called into consultation and certain tentative standards were set up. Further work on different aspects of the question was planned and will be worked out in the development of the program. It was agreed that hereafter the minimum requirements in professional training must be selected from five fields, educational psychology, secondary education, principles of teaching, materials and methods and directed or practice teaching.

In order to teach any subject, a major or minor must be offered in that field. In English, a major has been defined as 24 semester hours and a minor as 18 semester hours. Definite standards for other content subjects are in preparation with tentative standards as follows:

Latin: Twelve to 24 semester hours; 12 for the high school graduate who presents four entrance units in Latin; 15 for three entrance units; 18 for two units; 21 for one unit and 24 for no units.

French: Twelve to 24 semester hours, with the distribution the same as for Latin.

Mathematics: Twelve to 18 semester hours.

Science: Twenty-four to 36 hours, with 8 to 12 each in chemistry, physics and biology. When the major is mathematics the number of hours will be 18 with a minor of 24 hours in science. When the major is science the number of hours will be 36 with a minor of 12 in mathematics.

Social science: Twenty-six to 30 hours: Euro-

pean history 6 hours; American history 6; American government 6; economics 4 to 6; sociology 4 to 6; geography, no specification but recommended.

The subject combinations that have been given official approval are: English-Latin, English-French, English-social science, mathematics-science, mathematics-social science, science-social science, agriculture-science, agriculture-mathematics, home economics-science, home economics-social science.

The state department of education has developed new requirements for new high school teachers. The department now requires fifteen semester hours in professional courses in education, exclusive of general psychology; ninety semester hours of work, other than professional courses, in subject matter fields; the selection of the professional work from the fields mentioned and the academic work in accordance with the minimum requirements.

The new certification plan that is being worked out will eliminate the blanket certificate and will

permit the high school teacher to teach in only two fields in which he must be duly qualified. Prospective teachers are already being encouraged to shape their college programs to conform to the revised scheme of certification and in accordance with the approved subject combinations.

The last legislature passed a bill providing for an optional county unit which should ultimately improve the high school situation by reducing the number of smaller schools and permitting better educational procedure in teaching assignments. This law is in its infancy, however, and will be taken advantage of only slowly at the outset.

Determining Small School Curricula

The department has set up definite standards by which the smaller schools will be required to determine their curricula. These standards have been developed for the three-year junior high school, the four-year junior high school, the four-year high school and the six-year high school. The junior high school and the six-year high school have been

TABLE IV—SUGGESTED CURRICULUM AND SCHEDULE FOR A THREE-YEAR JUNIOR HIGH SCHOOL WITH TWO TEACHERS AND AVERAGE DAILY ATTENDANCE OF 40 PUPILS

<i>Curriculum</i>					
<i>Seventh Year</i>		<i>Eighth Year</i>		<i>Ninth Year</i>	
<i>Subjects</i>	<i>Periods Per Wk.</i>	<i>Subjects</i>	<i>Periods Per Wk.</i>	<i>Subjects</i>	<i>Periods Per Wk. Units</i>
1. English 7	5	1. English 8	5	1. English I	5 1
2. Mathematics 7 (Composite)	5	2. Mathematics 8 (Composite)	5	2. Mathematics I (Algebra)	5 1
3. Science 7 (Jr. Gen. Sci.)	5	3. Science 8 (Jr. Gen. Science)	5	3. Science I (General Science)	5 1
4. Social Hygiene (Geography)	5	4. Social Science 8 (U. S. History)	5	4. Social Science I (Community Civics and Occupations)	5 1
<i>Suggested Organization</i>					
<i>Teacher A</i>	<i>Periods Per Wk.</i>		<i>Teacher B</i>	<i>Periods Per Wk.</i>	
English 7	5		Mathematics 7	5	
English 8	5		Mathematics 8	5	
English I	5		Mathematics I	5	
Social Science 7	5		Science 7	5	
Social Science 8	5		Science 8	5	
Social Science I	5		Science I	5	
Total	30		Total	30	
<i>Suggested Daily Schedule</i>					
<i>Time</i>	<i>Teacher A</i>		<i>Teacher B</i>		
9:00- 9:45	English 7		Mathematics 8		
9:45-10:30	English 8		Science I		
10:30-11:15	Social Science I				
11:15-12:00	Social Science 7		Science 8		
12:00- 1:00	<i>Noon</i>				
1:00- 1:30	Activities—Home Room, Art, Music, Assembly, Club				
1:30- 2:15	English I		Mathematics 7		
2:15- 3:00	Social Science 8		Mathematics I		
3:00- 3:45			Science 7		

TABLE V—SUGGESTED CURRICULUM AND SCHEDULE FOR A FOUR-YEAR HIGH SCHOOL WITH FOUR TEACHERS AND AN AVERAGE DAILY ATTENDANCE OF 70 PUPILS

Curriculum							
Ninth Year			Tenth Year				
Subjects	Periods Per Wk.	Units	Subjects	Periods Per Wk.	Units		
1. English I	5	1	1. English II	5	1		
2. Social Science I (Com. Civics and Occup.)	5	1	2. Social Science II (World History)	5	1		
3. Science I (General Science)	5	1	3. Science II (Biology)	7	1		
4. Mathematics I (Algebra)	5	1	4. Mathematics II (Plane Geometry)	5	1		
Eleventh Year			Twelfth Year				
Subjects	Periods Per Wk.	Units	Subjects	Periods Per Wk.	Units		
1. English III	5	1	1. English IV	5	1		
2. Social Science III (American History)	5	1	2. Social Science IV (Prob. of Democ.)	5	1		
3. Science III (Chem. or Physics)	7	1	3. For. Language II (Latin or French)	5	1		
4. For. Language I (Latin or French)	5	1	4. Social Science V (Com. and Ind. Geog.)	5	1		
5. Mathematics III (Alg. or Alg. and Arith.)	5	1	5. Science III (Chem. or Physics)	7	1		
Suggested Organization							
Teacher A	Periods Per Wk.	Teacher B	Periods Per Wk.	Teacher C	Periods Per Wk.	Teacher D	Periods Per Wk.
Mathematics I	5	Science I	5	Soc. Science I	5	English II	5
Mathematics II	5	Science II	7	Soc. Science II	5	English III	5
Mathematics III	5	Science III	7	Soc. Science III	5	English IV	5
				Soc. Science IV	5	English I	5
				Soc. Science V	5	For. Lang. I	5
						For. Lang. II	5
Total	15		19		25		30
Suggested Daily Schedule							
Time	Teacher A	Teacher B	Teacher C	Teacher D			
9:00- 9:45	Mathematics I	Science II	Social Science III	English IV			
9:45-10:30		(Lab. (2 days)					
10:30-11:15		Science III	Social Science I	English II			
11:15-12:00	Mathematics II	(Lab. (2 days)	Social Science V	English III			
12:00- 1:00		Noon					
1:00- 1:30*	Activities—Home Room, Art, Music, Assembly, Club						
1:30- 2:15		Science I	Social Science II	For. Lang. I			
2:15- 3:00	Mathematics III			For. Lang. II			
3:00- 3:45			Social Science IV	English I			

*Schools beginning at 8:30 a.m. may offer the activities period from 10:00-10:30.

defined as departmentalized schools embracing either Grades 7, 8 and 9, or Grades 7, 8, 9 and 10, in the case of the former, and Grades 7 to 12, inclusive, in the case of the latter. A bulletin giving details of the reorganization plan, which includes varied curricula and definitely worked out daily schedules for thirteen different types of schools under the four divisions has been published by the state department of education. No provisions were made for the other types of organization as any school in a transitional state may easily adjust one

of the suggested curricula to its purpose. No attempt was made to set up standards for the larger schools, since sixty of them are held to the strict requirements of the North Central Association of Colleges and Secondary Schools.

According to the bulletin, "High School Reorganization," describing the new plan, "Mathematics, English, science and social science constitute the four nuclei around which the activities of the seventh and eighth grades are centered. Mathematics is preferably of the composite type. English

includes literature, dramatization, speech and writing and spelling for those who have failed to master these subjects in the elementary grades, and such other enrichment as the capable teacher may provide. Science includes physiology, health, hygiene and other adventures in science appreciation, usually given in recent science courses. Social science covers United States history, Arkansas history, geography and related material essential to the making of a good citizen in the junior high school. In all curricula, attention is directed to the provision for extracurricular activities, which include such teaching of music, fine arts and physical education as the small school can do. The latter possibility is limited by the talents, originality and versatility of the teachers. Small schools must find those teachers who have training in these lines or send their teachers who have a natural aptitude for such work to summer school for special training."

Two examples of the types of curricula prepared and organization suggested are given in Tables IV and V.

In several respects the most vital part of the program rests in the hands of the school executives of the state. Upon their shoulders falls the responsibility of carrying out the policies adopted in the reorganization plan. Theirs is a threefold task: first, the adoption from the curricula suggested of the one that best meets their needs; second, the selection of new teachers properly qualified and prepared to teach in the fields of the selected curriculum and the shifting of old teachers as nearly as possible to conform with the approved combinations; third, to assign teachers to only two fields if possible.

Program Is Well Received

The results of the survey and the recommendations as to tentative curricula were submitted to the school executives of the state at six regional meetings which had a large attendance. As a whole the executives were enthusiastic over the program and offered many constructive criticisms in the building of the curricula. It was also suggested by Mr. Hill that, "The patrons may cooperate by endorsing the movement and by becoming familiar with the essential details. They will realize that while a fixed curriculum may prevent their child from taking every single subject he wants, still it will ensure greater mastery in the subjects that are given. The plan is not theoretical but is a plan that has achieved success before. As to cooperative effort of the educators to offer more thorough instruction, it merits a respectful trial and patience in waiting for results. It is a five-year program, whose benefits should become more apparent year by year."

In his final report of the survey, Dean Taylor made the following statement, which was incorporated in the bulletin describing the new plan:

"If high school pupils in any state are to be efficiently taught, there must be close cooperation between the local community, the state department of education and the teacher training institutions in the state. In the local community the school board and the superintendent of schools must work together in building an efficient high school organization that will best meet the needs of the boys and girls of secondary school age in that community. Local conditions must be taken into account in building a curriculum for any particular high school.

A Goal Worth Attaining

"The school board and the superintendent, however, should bear in mind that their high school is a part of the state system of education, and as a unit of this system, they must keep in close touch with the state department of education and its program of work for the entire state.

"The state department must maintain a contact for the local community with the teacher training institutions in order that the local high schools may be provided with teachers who will be trained for the type of work necessary to the well-being of the high schools of the state. Frequently in the past teachers have been employed with little consideration of the subjects that they were qualified to teach. All too frequently teachers have been employed and subjects have been assigned after employment.

"In any well organized system of high schools no teacher will be called upon to teach more than two subjects, and each teacher will be called upon to teach only those subjects in which adequate preparation was procured while in college. In the reorganization program no teacher in the state of Arkansas will be called upon to teach in more than two fields. The colleges of the state have committed themselves to a program of education that will prepare every teacher going out from those institutions to teach the combinations of subjects as developed.

"If this program is carried through carefully as planned, in four years at the most every teacher in every high school in Arkansas will be teaching in not more than two fields, and every teacher will be qualified for the work that he has been employed to teach. This means that the children of secondary school age will be better taught and that the teachers will be happier in their work. It will result in a better understanding and better cooperation among all of the agencies responsible for the program of secondary education in the state."

What Careful Planning Has Achieved for This New Jersey School

The Tenakill School, Closter, N. J., is so designed that enlargements may be made without altering the present plan—a building survey provided for this—and the cost came easily within the appropriation set

By E. M. LEE, Lee and Hewitt, Architects, Paterson, N. J.

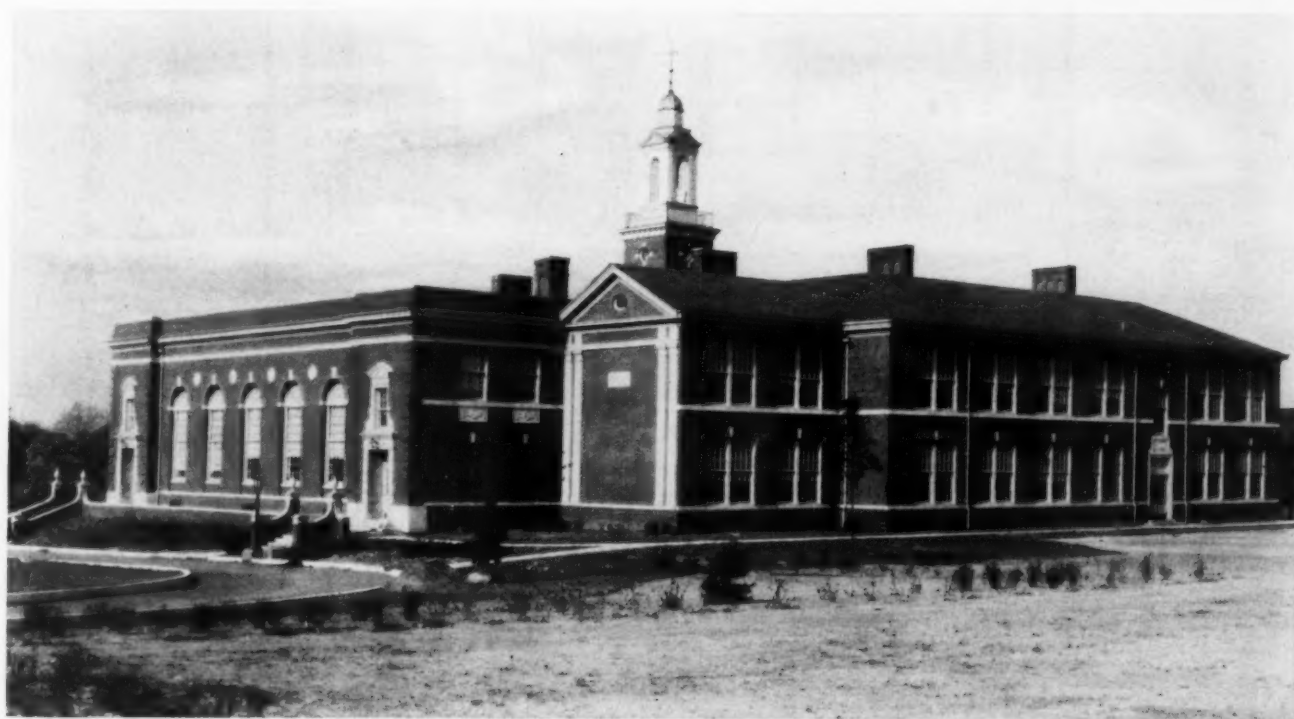
THE recently completed Tenakill School, Closter, N. J., offers an excellent example of the results that may be attained when the planners carefully study the school population requirements and adhere closely to the building appropriation, while designing a structure that will harmonize with its environment.

Boards of education are constantly faced with population shifts and increases, and with the opportunity of local organizations for needed new facilities and the replacing of obsolete buildings. The proper solution of the problem can be arrived at only after all of these elements have been carefully considered by those whose experience fits them for the work.

In this case, a thorough and comprehensive survey of the present and probable future school

population was made by the members of a prominent advisory firm. Their recommendations covered the location and requirements of the new building. The architects then made a study of these recommendations and evolved the plans that would conform to them. The size and topography of the site, the schedule for building in rooms and appurtenances, the general surroundings, the community background and history and the appropriation were the principal factors that had to be considered.

Since the site was between two highways, it was possible to provide two avenues of approach. The building, therefore, was planned to utilize this advantage by having both a school or service entrance and a civic entrance. An examination of the plan will disclose the manner in which this has



Exterior view of the Tenakill School, Closter, N. J., showing the auditorium wing and its separate entrance.

been accomplished—the school is entered from one street and the auditorium from the other—and the satisfying appearance of the building in its setting.

The architecture of the building follows the best colonial tradition and was selected for its relation to local history and true Americanism.

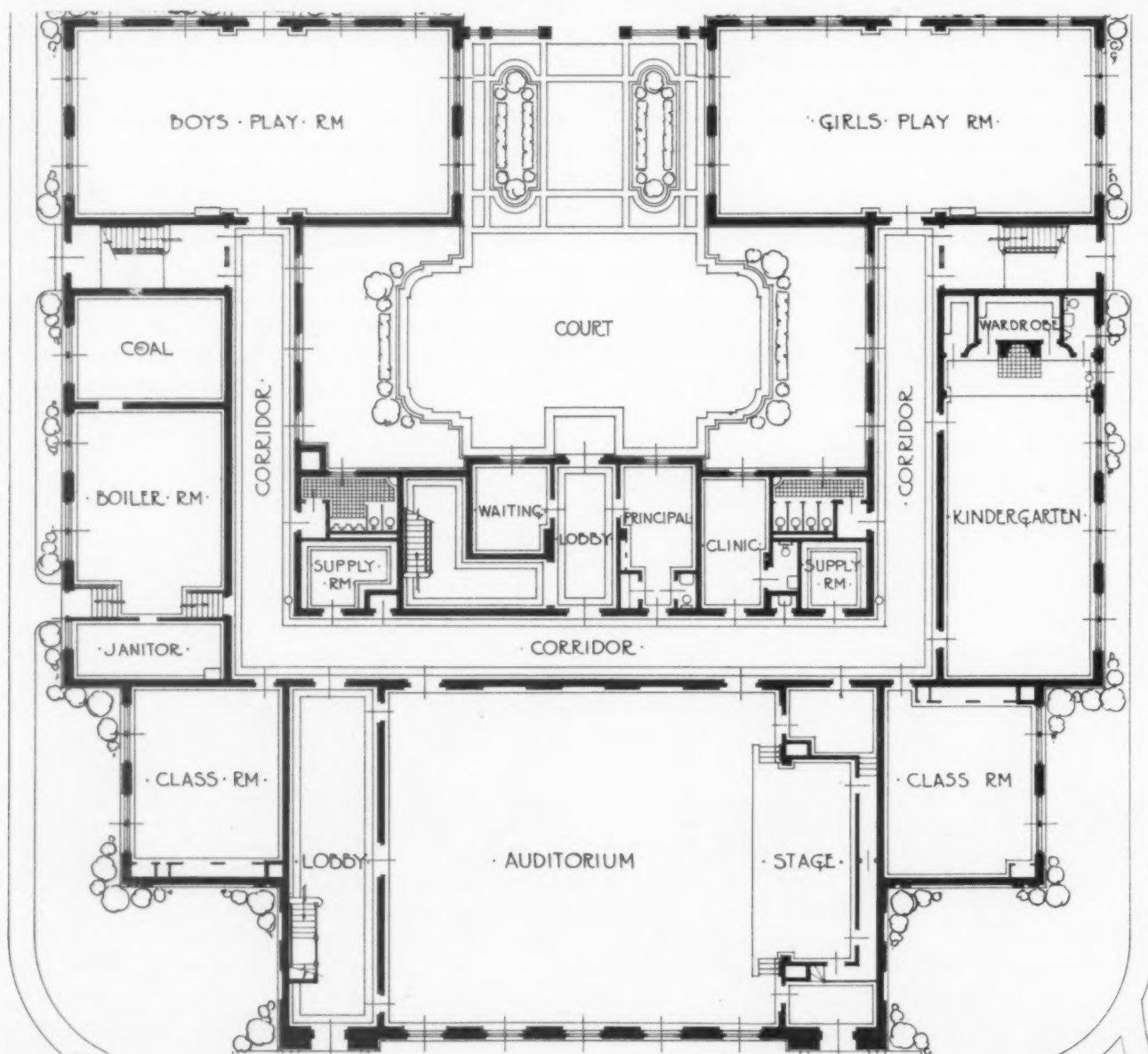
The appropriation, when divided by an average unit of cost, set a close limit within which the room and appurtenance schedule had to be kept. It was also considered expedient to arrange for future extension. This was accomplished without detriment to the architectural scheme of the building. All mechanical and other equipment has been installed to facilitate such an extension without any alteration to the present structural scheme.

The building in its present form consists of an auditorium, two regular classrooms, a kindergarten, a principal's office and waiting room, a clinic or nurses' room, a boiler room, pupils' toilets and

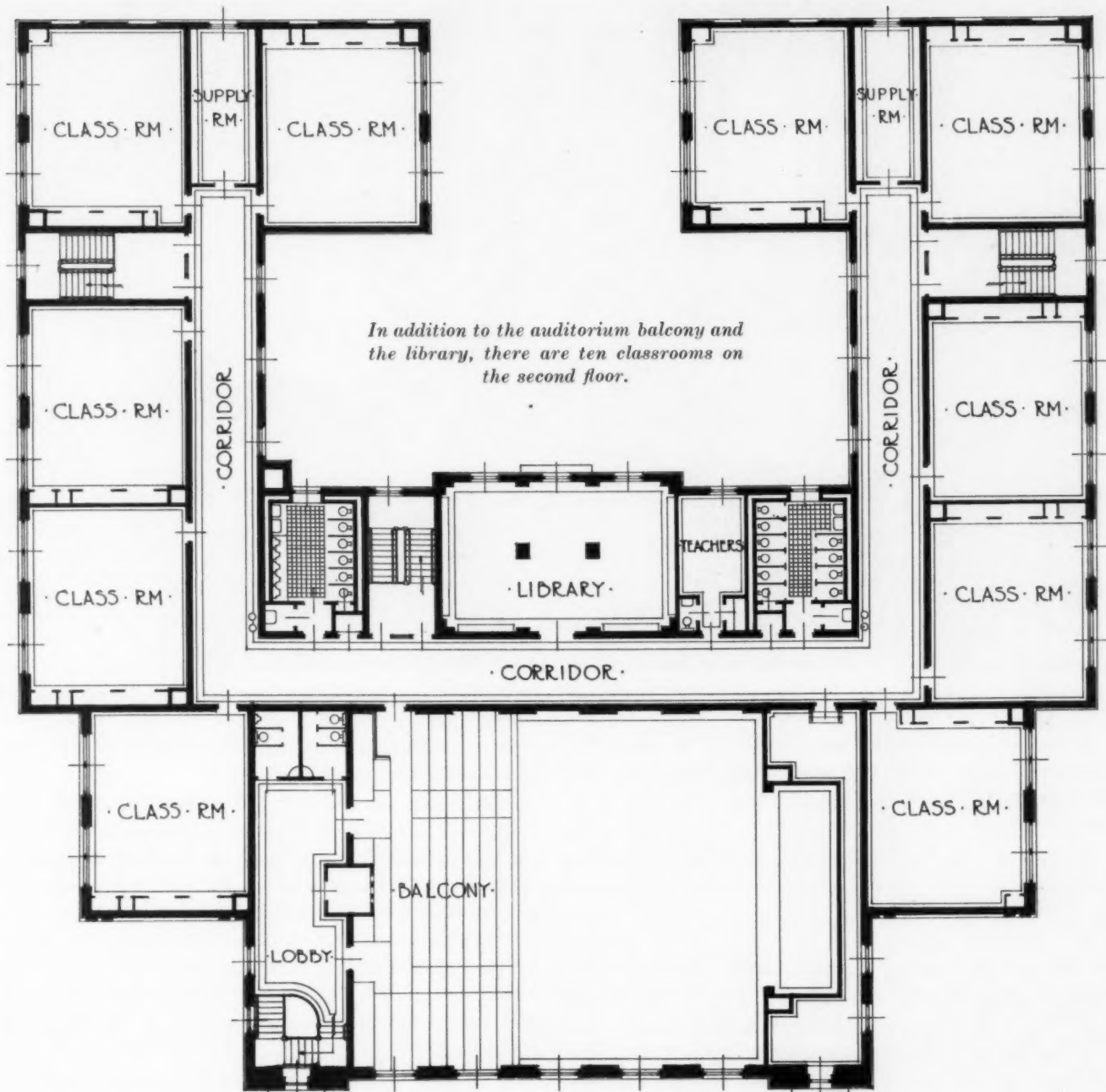
play spaces on the first floor, and ten regular classrooms, the library, the teachers' room, auxiliary toilets and the public toilets adjacent to the auditorium on the second floor.

The auditorium, with a large balcony, which is entered from the level of the second-story corridor, seats 700 persons. It is served by ample lobbies, has a large stage with dressing rooms on either side, toilets for the public use in the upper lobby, a projection booth and special lighting equipment. The lighting for both the auditorium and stage is controlled by dimmers and other apparatus placed in one of the dressing rooms. The entire room has been carefully treated in the early colonial style, and is finished in harmonizing tones. The windows are draped and the stage is provided with a handsome velours curtain hung in the latest improved manner.

Each classroom is provided with a built-in ward-



Plan of the first floor. The auditorium seats 700.



robe, a teachers' coat closet and a cupboard for books and supplies. Each wardrobe has a tight top, and a portion of the air provided by the ventilating system is conducted through the wardrobe to the exhaust flues, thus airing the clothing within.

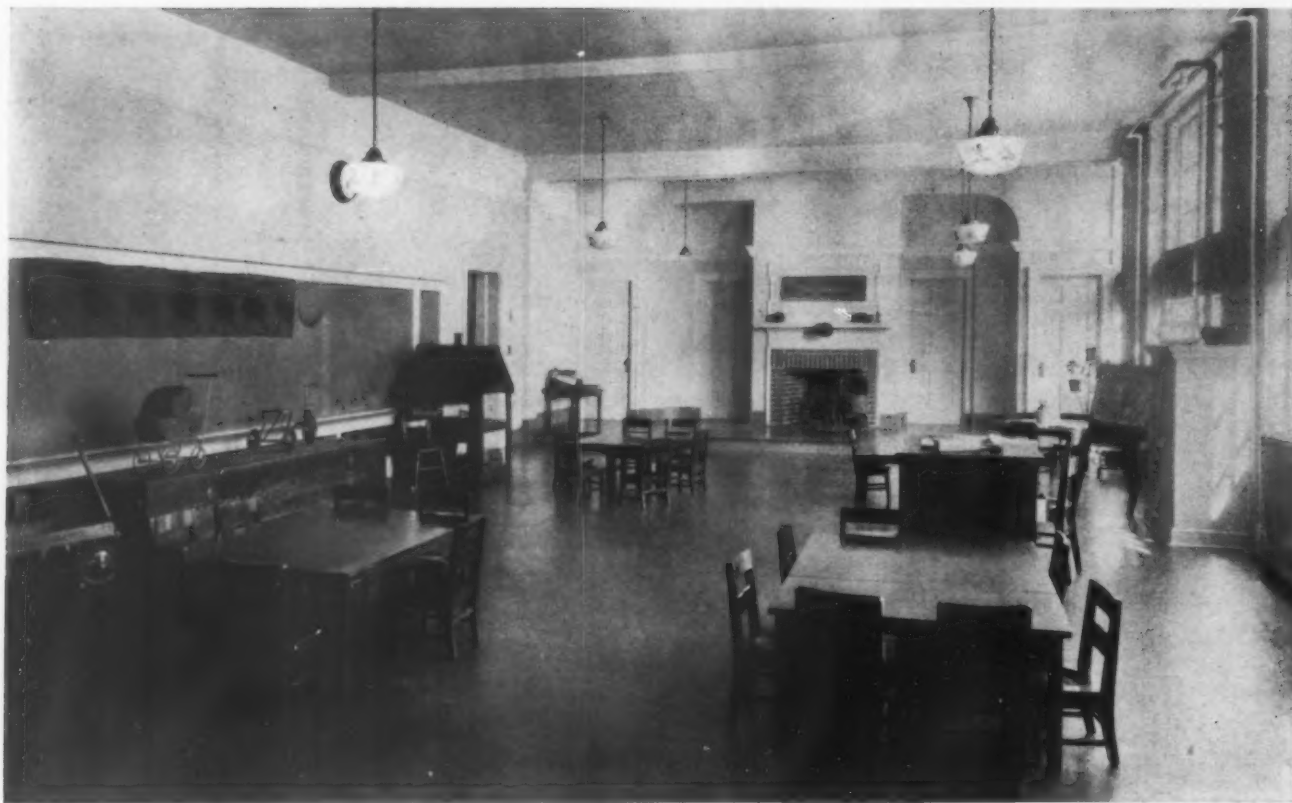
The kindergarten, which is a double unit the size of two classrooms, has been given special treatment and is provided with the most modern equipment. The room treatment includes a fireplace and mantel at one end set up one step from the main floor, behind which is the childrens' wardrobe. To the left is the teachers' supply closet and to the right is the private toilet for the children. Along one side and one end are specially designed folding seats or steps; along the other side are the closets

with compartments for each child's work or material. The lighting fixtures are supplied with specially designed globes.

The library is of ample size, conveniently located on the second floor. It is equipped with built-in cases. The treatment of this room is in harmony with the general design of the building. It is arranged and furnished to be used as a reference or study room and a meeting room for the board of education.

The administration rooms are centrally placed on the first floor, with stairs and other facilities close at hand to make possible the easy control of the entire plant.

In the classrooms, the unit type of ventilation has been used because of its flexibility. The toilet



The kindergarten, as large as two classrooms, has been given special treatment and has the most modern equipment.

rooms are ventilated by means of a specially designed system of exhaust which prevents the short-circuiting of the ventilation when the windows are opened. The air thus is kept fresh and free from odors whether the windows are open or closed.

How the School Is Heated

The steam heating system is of a forced circulation type. Steam is supplied from a battery of large cast-iron boilers through a vacuum system of piping and the condensation is returned to the boilers by means of vacuum pumps. The entire system is thermostatically controlled. Dampers in the fresh air intakes to the vent machines are controlled directly from the boiler room and dampers are placed in the main exhaust ducts to prevent the infiltration of cold air during the night.

The building is designed in accordance with the school laws of New Jersey to accommodate the long term bond issue under the classification of a fire resistive building. The floor construction is of concrete; the ceilings are wire lathed and plastered; the partitions are of fireproof block construction; all of the stairs are of steel and iron with wrought iron railings and are enclosed in brick towers lined with a light face brick. The finished floors throughout the corridors are mastic, laid directly on the concrete slabs. The side walls of the corridors are tiled with mat glazed tile to a height of five feet,

with a sanitary cap and marble base. The toilets have tiled floors and walls.

The original estimate was made for the work complete. It included the grading, seeding and sodding of the site; the paving of the roadways and all of the cement walks and curbs; the ornamental paving in the court, together with the flag pole and the sun dial; the wrought iron fence dividing the property from adjacent land, and the furniture and other equipment. At the completion of the work it was found that the cost came within the original amount set.

A Bibliography That Should Interest Administrators

The writings of the late Fletcher Bascom Dresslar from 1886 to 1930 have been gathered in bibliographic form by Haskell Pruett, Oklahoma Department of Public Instruction, and printed in full in the *Journal of the Tennessee Academy of Science* for April, 1932. The compilation was made by one of Doctor Dresslar's former students.

The bibliography covers a fair range of subjects, but the most significant productions are those relating to the public school plant in which field Doctor Dresslar achieved his greatest prominence. The list should be of real interest to men and women in administration.

How Superintendent Turnover Can Be Reduced

Three main planks in the successful superintendent's platform are: training for cultural and professional leadership in his field; sound selection and management of teachers; a satisfactory public relations policy

By FRED G. STEVENSON, Formerly Superintendent of Schools, Dubuque, Iowa

NEARLY every year important changes occur in city superintendencies. Some of these may be regarded as normal, such as those due to death or retirement or the promotion of a superintendent to a larger system; many of them result from misunderstanding and conflict within school districts which split school boards and divide communities.

One group may charge that the superintendent is incompetent, "crooked," or immoral; another, that he is the victim of unprincipled attacks by selfish enemies, that he is virtuous and efficient and a man whom it will be impossible to replace. Newspapers are quick to play up these charges and countercharges. The emotional upsets that accompany such conflicts are inevitably harmful to the schools. The real issues are befogged, the interests of the children are overlooked. The culmination is the dismissal of one superintendent and the selection of another whose first task must be the rebuilding of morale.

What Board Members Think of the Question

I have observed a number of such changes and have had opportunities to talk with school board members involved in several of them. These men are frank in discussing the mistakes and weaknesses of superintendents whom they are replacing. The following six "cases" are presented from the points of view of the school board members. Conclusions may be drawn from them which may be helpful.

Case 1. Dismissal, Split Board. The school board has notified the superintendent that he will not be retained after the expiration of his contract at the close of the school year. The board is divided on the issue. Two out of the seven members, a business man and a woman with a flair for social service, are vigorously opposed to the change and are exerting every effort to stir up sentiment so as to force the retention of the superintendent. The

man is so bitter about it that he refuses to discuss the matter other than to say that the majority members have given the superintendent a "dirty deal." The woman member explains that the superintendent is the victim of interclass strife. The majority members, she says, are siding with an aristocratic class who are opposing the superintendent's efforts to concentrate attention on the need for improvement of school conditions in a poor industrial district.

The Other Side of the Story

The "anti's" tell a different story. Among these are the president of the board, a prominent merchant; another merchant who is chairman of the committee on education; a widely known politician; a prominent society woman, and a professional man. The society woman, who is a new member, states that there has been widespread discontent at the inadequacy of the schools for some time. She has been elected by those who wish to improve conditions. The superintendent has not appeared to be aware of the reasons for this discontent. She claims that in all his public talks, of which he has given many, he speaks only of the "underprivileged children" of a certain section of the city.

The president of the board doubts the present superintendent's knowledge of his field. "He does not seem able to formulate a policy for the board. We know what we want but he does not want to recommend that and he doesn't seem ready to recommend anything else." Other majority members express similar opinions. The politician adds that there are principals in the corps who have been disloyal to the superintendent and who may give trouble to his successor. He claims that the board will not tolerate any disloyalty to the new superintendent.

Case 2. Dismissal, Split Board. In this case the superintendent has held his position a year in

spite of the opposition of the board, owing to a coup of the preceding board which gave him his contract just before the school election. The election issue was the retention of the superintendent, and the "anti's" won. The community experienced a severe emotional upheaval.

The superintendent's friends claim that he has done wonders for the schools and that opposition to him is being organized by forces opposed to good public schools. His enemies claim that he has taken the credit for accomplishments of his predecessors and for achievements of members of the teaching staff. They claim that his propensity for self-advertising has weakened the morale of the staff and that a number of the better teachers left the system because they could not get along with him. The majority finally selects a new superintendent.

Case 3. "Release," Split Board. In this case a superintendent is being "released" at his own request from a good superintendency. This board, too, is divided. There would be a deadlock except for the fact that the new president, who under the charter votes only in case of a tie, throws the balance of power to the "anti's." That conditions are serious is admitted by all the members. Even the friends of the superintendent are convinced that he must leave. They claim that he has been the victim of vicious attacks upon his character as a man and upon his reputation as a school man. Though they still believe in him, they feel that a change has become necessary.

The opposition is led by an ex-teacher of the type, one would judge, who pride themselves on "keeping perfect order" and allowing nothing to be "put over" on them. As chairman of the teachers' committee it will be her duty to recommend to the board the choice of her committee for the new superintendent. She is emphatic about the faults of the present superintendent, and will not tolerate similar faults in the new one. The present superintendent, she says, has built up a political following through joining clubs and societies by means of which he has attempted to force the board to act favorably toward him. The new superintendent "must mind his own business, take care of educational matters, and let the board attend to its own business."

An Unfair Practice

A professional man who is a member of the committee throws more light on the situation by stating that the superintendent brought with him from other places in which he had worked the key members of his staff, and that his relations with these people have aroused the resentment of other members of the teaching force.

A third member of the teachers' committee, a

junior executive in an industrial plant, thinks that the present superintendent must "have it in for" a friend of his who is manager of a teachers' agency. "Since this fellow has been on the job my friend hasn't placed a teacher in our schools."

Case 4. Resignation, Split Board. The superintendent is an able young man, with much better training than anyone who has previously held the position. The board consists of three men and two women. The men are business men, one of the women is a professional woman and the other a society woman.

The Superintendent as a Ringmaster

The opposition centers around the professional woman, who was at first the strongest supporter of the superintendent. She is convinced that the superintendent is trying to be a circus ringmaster, and she, for one, objects to jumping through hoops at his command. He has shifted and dropped personnel and has tried to force through reductions in some salaries and increases in others until a veritable hornets' nest has been stirred up. Newspapers are filled with accounts of school board strife. Two of the men attempt to support the superintendent against the opposition of the other three members.

The situation reaches the breaking point over a case of school discipline involving a child of one of the prominent citizens. The whole community is now divided. Disaffected members of the staff and the society element take the side of the majority of the board against the superintendent. An "investigation" is conducted. The superintendent is asked to make a report. The board rejects the report and the superintendent presents his resignation which is immediately accepted.

Case 5. Dismissal, United Board. The president of the board, a young engineer in charge of a large industrial plant, explains that the board has found it necessary to notify the superintendent that he will not be retained. The superintendent means well, but after a year of study and many conferences with him the board has found that he is not able to handle the situation.

There are some excellent administrative and supervisory officers on the staff who are more able and who have a better grasp of educational problems than the superintendent himself. They are highly trained and ambitious, but they cannot work together, possibly because they come from two different training institutions whose philosophies of education are said to be diametrically opposed. Staff meetings frequently degenerate into wrangling. Teachers are confused. The superintendent has been evading issues instead of meeting them and settling them. Other members

of the board agree with the president. They make similar statements and discuss problems which they are facing and on which they need the help of a new superintendent.

Case 6. Promotion, United Board. This superintendent has been called to another system at a big advance in salary. Members of his board hold him in high regard. One of them claims there is no better superintendent in the country; but another expresses some reservations about him. He has been a good man on the job, and he has had the cooperation of his teachers; but there is some feeling that he has neglected the fundamentals for showier projects. Graduates of the high school who have stood near the top of their classes have had to take as much as a year of additional preparatory training before being admitted to full freshman standing in a prominent university. No member of the board seems to fear any possible harm to the schools as a result of a change in superintendents.

These cases might be multiplied. It is regrettable that in our system of local control of the administration of public schools, which has produced such phenomenal advances in public education throughout the country, so many conflicts of this sort arise to handicap local school systems. In nearly every one of these cases the majority of the school board members considered that the superintendent was at fault. It would be foolish to claim that every majority is right, but it would be equally foolish to contend that all majorities are wrong. This logic gains in force from the fact that majorities of school boards govern, and "might makes right." The school board members who voted against these superintendents are probably fairly representative of school board members in general. A few of them, less than 10 per cent of those mentioned in these cases, seem to have sought to use their positions directly to secure advantages for themselves or their friends. A few, unquestionably, were motivated by the desire to "show who was boss." But at least four-fifths of these board members seem to have had the best interests of the schools at heart, as far as they knew them.

Trying to Be "the Whole Show"

In all of the cases except one, some members of the board were convinced that the superintendent was trying to run the performance, and in four of the cases the majority believed that he was trying to be the "whole show." Some superintendents do get exaggerated notions of their individual personal importance and of the extent of their responsibilities. Textbooks on school administration tell them that the most important duty of the

board of education is the selection of the superintendent. Previous training in "education" and experience in the profession of teaching seem to develop in them notions of infallibility.

Members of boards of education themselves share the responsibility for this overemphasis of the superintendent. The great majority of them have business or professional interests of their own as a means of livelihood. When they have selected a superintendent they are inclined to make extravagant claims for him. They have satisfied themselves that he is competent, and as long as things run smoothly they give him free rein. They are inclined to refer citizens who question them about general matters of school policy and conditions to the superintendent, "who is hired to take care of such matters," rather than to take the time to give the information themselves or to demand that answers to such questions be put into readily accessible form for general distribution.

The Evils of Dictatorship

Some board members are strongly influenced by those portions of the community with which they come in contact. If taken to task for voting for an unpopular measure it is easy to put the onus upon the superintendent who recommended it. One retail merchant who turned against a superintendent in this manner, gave his reason succinctly, "I am not in business for my health." When public opinion affects the cash register it affects votes, even of school board members. What is more natural to expect than that a superintendent, whose success receives magnified praise, will in times of trouble be the victim of magnified censure? A superintendent who permits himself to be regarded as a dictator is storing up trouble for himself and for the school system. No matter how friendly the board may be, when the storm comes the members will either vote him out or they will lose at a school election to new members who will.

Legally the board of education is responsible for the operation of the schools. The superintendent is chosen as the executive officer of the board and in no sense as an independent executive responsible to the people. If there were only one employee, he would be a "hired man" under the control of the board. The superintendent, as head of the staff, is directly responsible to the board of education for such successful operation of the school system as is possible along lines of policy adopted by the board, and with the personnel and equipment provided by the board. The success of the schools is not alone his personal success, and their failure is not alone his personal failure. The success or failure of a school system is the success or the

failure of its board of education and community, as well as of its superintendent and staff.

One of the greatest responsibilities of the superintendent, therefore, is to keep the board and the community informed of their success or failure, not of his success. This matter of reporting is fundamental. It is obvious that in some of the cases presented the superintendents themselves were not informed as to what was going on in the schools. In order to keep a board properly informed a superintendent must keep himself informed. If the board and the community are reliably informed of the successes and the needs of the schools, if credit is given where credit is due, then responsibility is likely to be accepted where responsibility belongs. The public should know, for instance, that a superintendent does not build school buildings nor refuse to build them. He studies conditions and reports and recommends, but the board acts and is responsible for its acts.

Another phase of reporting has much to do with the attitudes of the staff and of the community toward the superintendent. There was a notable tendency in some of these cases to "headline" the superintendent. Whether it was the conclusion of a successful athletic season, the winning of a high school debate, the success of a school cafeteria, or a teacher's new method for handling some phase of instruction, the name of the superintendent was prominently mentioned and sometimes his picture appeared. All these things and more should be reported, but the names and pictures of the pupils and teachers concerned should be given prominence, and it is sometimes better for the superintendent to remain "out of the picture." Often he can suggest to clubs and organizations looking for speakers that they invite a teacher or a principal who is doing an interesting piece of work to give them first-hand information about it. Demonstrations and exhibits of pupils' work are valuable. This type of reporting builds up confidence and good will, which carry a good administration through minor difficulties and result in long tenure.

Keeping Up the Teachers' Morale

Public confidence in a school system is also built up by promoting personnel from within the system whenever the opportunity is afforded, and when the qualifications of any members of the corps are equal to those of any outside applicants. Morale of a teaching corps is considerably weakened when it becomes known that the only avenue of advancement leads out of the system.

In recommending persons from outside the system a superintendent should be cautious about bringing in those who have worked with him in other places. Such persons should be hired only

if they are exceptionally better qualified to do a required piece of work than others who are available. If such persons are appointed it is important that no favoritism be shown and that official relations be professional and businesslike. Madame Grundy is always ready to stir up trouble for school officials, and nothing starts her at her pernicious activities more quickly than this matter.

Factors That Affect Success—and Failure

In Case 5 there appear to have been two other factors that affected the success or failure of the superintendent. The first was his knowledge of the general field of education. A superintendent must know something of the different philosophies of education that have dominated educational systems in the past; he must know the rival philosophies that are contending for dominance in the schools today, and he must have his own philosophy of education. Such knowledge is necessary if he is to exercise professional leadership. The second factor involved was the selection of personnel that would work together. If the superintendent in Case 5 had obtained the adoption of the "child centered" school policy by the board, then the new personnel should have been selected with that in mind and the existing personnel should have been given that point of view. If a conservative compromise between the "child centered" and the "teacher dominated" school was intended then the teachers and the staff should have been trained and new personnel selected accordingly.

The successful superintendent stands on a platform of community understanding and confidence. There are three main planks in that platform, all of which are necessary for successful administration. Those who omit any one of them are likely to find their footing precarious. The first of these planks is equipment for cultural and professional leadership in the field of education. This type of training is becoming more general among school men and is being recognized by teachers and laymen. This training alone, however, is inadequate, and it tends to magnify the superintendent to such an extent that it causes him sometimes to lose his balance. The second plank is the selection and management of teacher personnel according to sound principles. A superintendent who has the confidence and support of an efficient body of teachers is not likely to be in danger of falling. The third plank, which completes the platform and makes it safe, is reporting, a public relations policy. The superintendent who understands his work knows that an essential part of it consists in keeping the board of education and the community interested in and acquainted with conditions in their schools.

How Much Does It Cost to Carry on Adult Education Courses?

How a California city provides for the education of its adult citizens is described here, and should offer to administrators a basis for evaluating similar work in their schools

By ROLAND M. MILLER, Principal, Evening High School, Sacramento, Calif.

THERE is no generally accepted philosophy of adult education. Indeed, there is more than one connotation of the term "adult education."

However it may be defined, a large part of this education is being carried on in the United States through the medium of the public schools. The majority of these mature students attend evening schools. Evening school education differs in certain fundamental respects from the rest of the school system of which it is a part. Some knowledge of these peculiarities is essential for the adequate administration of such schools. Foremost among these considerations is the matter of costs.

The purpose of the present article is twofold: first, to discuss certain characteristics of evening school costs and, second, to encourage administrators throughout the country to compare their expe-

riences on evening school costs, so that tangible, workable standards may ultimately emerge.

For our purpose costs may be classified as follows: (1) instructional costs, including teacher salary costs and supplies and equipment costs; (2) administrative costs, including central office costs and school administration costs; (3) housing costs, including capital outlay and heat, light and janitor services.

As a general rule, instructional costs comprise about 70 per cent or 75 per cent of all evening high school costs, teacher costs accounting for from 60 per cent to 70 per cent.¹ Not only are these costs the major portion of all costs but they are subject

¹In the case under discussion the percentage allocation of costs for the fourteen-week term was as follows: teachers' salaries, 60 per cent; principal and clerk, 23 per cent; heat, light, janitors, 7 per cent; other current expenses, 10 per cent. This does not include a consideration for the rent of the buildings or any contribution toward the central office administration costs.



The dramatic-pictorial method of teaching beginning English for the foreign born makes possible the acquisition of a workable knowledge of the language in an incredibly short time.

to wide fluctuations and may serve as a valuable index of the efficiency with which a school is being run. Accordingly, the present analysis is confined to a study of teacher salary costs.

To facilitate comparisons, costs are reduced to cents per student-hour of attendance. Two bases of computation are taken—the weekly average for the entire school and the per term average for each subject.

These illustrations are drawn from a California city of 100,000 population with one evening high school. It may be mentioned in this connection that California provides by law for special state

It is apparent that after the second week the school is characterized by constantly increasing unit costs. This can be shown to be a normal condition for evening adult education. First of all, there is a constant flow of adults in and out of evening schools with a tendency for those going out to outnumber those coming in after the first rush of the season is over, due in part to the ever present "shoppers."¹

It becomes apparent then that any statement as to instructional costs has meaning only when it is accompanied by an explanation regarding the time to which it refers. It makes a difference



This class in naturalization has been conducted by the same instructor since 1916. A modified short unit organization of the course has made large classes compatible with good results.

and county aid for adult education. The school is conducted five nights a week for two hours. Instructors uniformly receive \$5 an evening. Classes are dropped when the attendance falls below ten for three consecutive evenings. The year is divided into three terms, with logical breaks at Christmas and Easter. No registration or tuition fees are charged.

In order to arrive at an index of weekly teaching costs for the school as a whole the following formula is used:

$$\frac{\text{Total compensation paid to teachers, per week}}{\text{Total student hours of attendance, per week}}$$

On this basis Table I is derived.

whether the computations are quoted for the fifth week or the twelfth week or for the term taken as a whole.

After certain local explanations are made to account for the increase in per student costs, the general answer must be sought in the reasons for the progressively decreasing survival indexes, characteristic of all adult evening schools.

New students coming in may offset, for a time, the effect of old students dropping out, but an increasingly large percentage of the total enroll-

¹Findings relative to the holding power of free and fee charging evening schools, as reported by George E. Smith in *Adult Education*, vol. 6, No. 2, are doubtless open to serious question, due in part to the method of reporting. Survival ratios are only comparable when taken on the same week of school by all cities reporting. This is due to the fact that survival indexes cumulatively shrink as the term progresses.

ment is designated "inactive" as the term progresses. Without going into the causes here, this characteristic of a per student cost index may be accepted. However, this does not answer two important questions: What range is defensible over a given period of time? What general level of cost is defensible?

Under the first, is the range 9.25 cents to 15.51 cents too wide for a fourteen-week term? Under the second, is the average of 11 cents indicative of a too high cost of education? Is it too low? Is it about normal?

One way of answering these questions is to refer

tation of the subject? On the other hand, a wide range may be partly due to the progressive methods of adult school administration.

At least two such methods are worth noting. In the first place, the organization of courses on the unit basis makes it possible for an adult to take with profit certain units although he misses others, intentionally or unintentionally. The length of time necessary for an adult to get what he wants need not be coterminous exactly with the school term or year. This possibility of finishing, according to the convenience of the student, before a term or year is up will tend toward a widened



The advanced short story class is made up of a number of successful contributors to newspapers and magazines. Stories submitted by class members are critically analyzed by the whole class.

to standard practices over the country. Another way is to refer to the experiences of a number of admittedly well regulated schools. Such norms unfortunately are not available. Certain judgments, however, may be advanced which are not altogether *a priori* or fortuitous even though they are based on a limited sampling of evening school experience.

Regardless of the general level of costs, a wide range of weekly costs would seem to point to weaknesses in the conduct of the school. Are the students leaving because they are not getting what they want? (This an adult student will readily do.) Is this due to poor judgment in the subjects offered? Is it due to poor organization or presen-

range in indexes relating to instructional cost.

In the second place, certain courses are better organized on a short unit basis. A class is organized to cover a given piece of work in a given number of sessions, all students working together. This may be illustrated by an eight weeks' course on the building and loan code. Obviously these short unit courses will almost never be coterminous with the school semester. Due to the relatively stable attendance characteristic of short courses, they would tend to decrease the range while in operation. When they terminate before the end of the term their stabilizing influence would be withdrawn from the indexes of subsequent weeks.

TABLE I—PER STUDENT-HOUR COST FOR INSTRUCTIONAL SERVICES FOR AN EVENING HIGH SCHOOL*

<i>Averages per week, September 14, to December 18, 1931</i>	
<i>Week</i>	<i>Cost</i>
1.....	9.25 cents
2.....	8.57 cents
3.....	9.07 cents
4.....	9.57 cents
5.....	9.80 cents
6.....	10.58 cents
7.....	10.60 cents
8.....	10.78 cents
9.....	11.63 cents (Wed. out)
10.....	12.89 cents
11.....	7.40 cents (Thurs. and Fri. out)
12.....	13.13 cents
13.....	14.51 cents
14.....	15.51 cents

Average
per term, 11.06 cents

*Read as follows: During the first week instructional services cost on the average of 9.25 cents for each hour of student attendance. For purposes of analysis the ninth and eleventh weeks must be disregarded as they represent partial weeks only, due to holidays.

From these considerations it seems that instructional cost indexes which did not show a spread might engender a suspicion that improved methods of organization were lacking. In this regard it is possible that the relation of the term average to the weekly averages is significant, both with respect to magnitude and location. In the present illustration the term average is 11 cents, which was passed by the weekly averages in the ninth week. Approximately a 2-cent span above and below 11 cents accounts for all except the last two weeks. The effect of the impending Christmas holidays in draining off certain types of students may in part explain the indexes for the last two weeks.

Table I presents the indexes of but a single school. Do they indicate able administration or otherwise? Hundreds of evening school administrators must be asking the same question as they study their own figures. Evaluation of our practices requires standards. We are inclined to compare what we are doing with what we have done. If the present shows improvement over the past we are content. The inadequacy of the judgment is determined by the inadequacy of the standard used. A defensible standard awaits a widespread comparison of experiences.¹

In a consideration of the level of instructional costs, the question in this instance is: "Is an average of 11 cents per student-hour defensible?" Here

¹A summary, based on a compilation of all the materials received, will be sent to all administrators of evening schools who will submit data relative to their costs. Address, 2631 "M" Street, Sacramento, Calif.

again we lack adequate standards although we have certain guides not available for the problem of range already discussed. The school law in some states makes more liberal provision for adult education than in others. California has the honor to stand in the vanguard in this respect. State and county contributions vary somewhat for different districts in California but for the case under discussion they yield an estimated 18 cents per student-hour of attendance this year.

There are two theories regarding the legal provisions for the support of adult education such as is found in the California law. One is that the funds received on the basis of the average daily attendance from the state and county should pay all the additional costs caused by the adult program. Another theory is that the school district as such should contribute towards the program. There is little agreement as to how much should be so contributed.

A study of these theories is beyond the purpose of this article. The costs under discussion, however, may be viewed in the light of their relation

TABLE II—PER STUDENT-HOUR COST FOR INSTRUCTIONAL SERVICES AVERAGED BY SUBJECTS*

<i>Averages for the term, September 14 to December 18, 1931¹</i>	
<i>Cents Per Hour</i>	<i>Subjects</i>
2.9	Salesmanship
4.8	Naturalization
7.3	Spanish (3 classes)
8.6	Typing (4 classes)
9.2	Business English
9.6	Shorthand (6 classes)
9.7	Art
10.0	English, Ninth Grade
10.6	Public Speaking
10.9	English, H. S.
11.0	Lip Reading
11.1	Short Story
11.5	Sewing
11.6	Accounting (4 classes)
12.2	Mechanical Drawing
12.4	English for Foreigners (3 classes)
12.9	Woodwork Shop
13.5	French (2 classes)
14.7	Cooking
15.4	Banking (6 classes)
16.0	Millinery
16.5	Mathematics
16.8	Elem. Eng. and Arith. (2 classes)
17.9	Building and Loan
19.7	Art Needlework
20.2	Business Law

*Read as follows: Costs of instructional services for Salesmanship averaged 2.9 cents for each hour of student attendance during the term.

¹These costs vary with the time of recording as do those in Table I and should not be compared with similar averages computed for any given week.

TABLE III—PER STUDENT COST FOR INSTRUCTIONAL SERVICES CLASSIFIED BY SUBJECTS*

¹ 2-	¹ 4-	¹ 6-	¹ 8-	¹ 10-	¹ 12-	¹ 14-	¹ 16-	¹ 18-	¹ 20-
3.99	5.99	7.99	9.99	11.99	13.99	15.99	17.99	19.99	21.99
² 1	1	1	4	7	4	2	4	1	1

*Read as follows: There were seven subjects for which the costs of instructional services, during the term, averaged between 10 cents and 11.99 cents for each hour of student attendance.

¹Cents per student-hour.

²Number of subjects.

to the apportionment provision of the state school code. As teacher costs comprised 60 per cent of the total costs, the average appropriation per student-hour would be 10.80 cents, which is slightly less than the 11 cent average student-hour costs of Table I. This would, at least from one point of view, tend to justify the general level of teaching costs in the table.¹ Here again it would be valuable to know what central tendency other progressive schools reveal in this regard.

In order to make an analysis of teaching costs per subject the following formula is used:

Total salaries paid to teachers for the term,
per subject

Total student hours of attendance for the term,
per subject

On this basis Table II is derived.

To one unfamiliar with evening school costs Table II might seem to show an incredibly wide range of costs for a single school. Some range might be expected, however, because of differences in the nature of the subjects, in methods used in various courses, in instructors and in the demand for various subjects, which affect the size of class.

It is not my intention to defend either the range of costs recorded in the table or any item therein. Some attempt to find a more or less normal or characteristic spread might be justified, however. To this end, a scale may be made as in Table III centering around the term average of 11 cents and divided off into 2-cent units.

Over 26 per cent of the subjects falls within one cent of the 11-cent term average of Table I. About 58 per cent falls in the six-cent range from 8 to 13.9. The position of the remainder on the scale might warrant further investigation.

By such a method as this certain extremes of high and low costs are thrown into relief. They challenge the questions: Are some costs too low for educational efficiency? Are some too high for financial efficiency? The answer to these questions will come through evaluation of factors other than the statistical evidence considered here.

¹State and county appropriations in California have in the past borne from 39 per cent to 142 per cent of adult education costs in various districts: Administration of Adult Education in the Public Schools of California, Joseph E. Warne, Master's Thesis, University of Southern California, 1930.

Such a technique, however, reveals certain relationships existing between specific services and their costs. To isolate an event is the first step toward making an adequate judgment about it.

The application of cost accounting to units of service given in evening schools has value in emphasizing certain characteristics of costs involved in adult education. By the pooling of experiences, some general standards of good practice relative to costs might emerge that would be of distinct value to administrators in analyzing their programs. Cost is not the only measure of school efficiency. It is, however, an important one.

The experience described here represents neither standard nor ideal practice. It is submitted solely in the interests of improved standards for evaluating evening school administration.

A Popular Home Economics Course for High School Boys

That boys do like to cook is proved by the popularity of the course in home economics that is being given in two high schools of Peoria, Ill. A complete description of the course is presented in the April, 1932, issue of the *Illinois Teacher*.

The purpose of the course is not to make housekeepers or cooks, or to develop any special skills, but to develop an appreciation, a better understanding of the real meaning of home. The course has four units—Family Relationships, Clothing, Foods and Child Care.

In the course in family relationships, the boy is given an understanding of the real meaning of home. Much time is spent on a study of the business of the home so that he can have an appreciative attitude toward the efforts of parents in solving the economic problems of the family.

The boys are especially interested in the clothing unit. They themselves decide the practical problems they desire to be taken up in class on care of clothing.

In the study of the selection of clothing, one evening is spent in a men's clothing store. The head of the department is given an outline of the points to stress in his talk to the boys. The outline suggests: Why the difference in the price of clothes? Fabrics used for men's clothes; construction; comparison of cheap, medium and high priced clothes; clothes suitable for the individual; clothes suitable for outstanding types.

The purpose of the food course is to have the boy better understand the importance and value of health—the importance of establishing daily food habits to produce positive health and to gain a knowledge of the body's need for food.

Professionalizing Teacher Placement

A study of and recommendations for the best methods of placing teachers, based on questionnaires sent to superintendents, placement officers and teachers and on supplementary material

By J. S. SCHULTZ, Director of Teacher Training, Bluffton College, Bluffton, Ohio

FOR the school administrator who places the interests of the pupils first, teacher placement means selecting the teacher who can render best the service a given position requires. He assumes that the placement officer is equally interested in pupils and will recommend teachers who can be expected to give the best service. Teacher placement on this level can be performed only by specialists.

Four types of placement agencies intended to assist schools and teachers or employers and employees in finding each other have developed: private agencies, placement bureaus connected with training institutions, state departments of education and state education associations. Private agencies have existed for nearly a hundred years, while the other three types have been established during the last quarter of a century. In number of organizations, the institutional bureaus now seem to surpass all others, since about two-thirds of all teacher training institutions carry on this work. These vary from those that are well organized and professionally directed to those that merely render incidental service to teachers. Well organized bureaus are found in ten state departments of education and six education associations. There are more than one hundred private agencies. The National Association of Teachers' Agencies has sixty-eight members.

Questionnaire Method Used

The purpose of this study was to determine how teacher placement can be improved or professionalized. The investigation was primarily by the questionnaire method, however, current literature, personal contacts and correspondence were used as supplementary material. Approximately 250 questionnaires were returned by superintendents, placement officers and teachers.

"Teacher placement bureau" is the name most frequently used by public agencies for this service. It is gratifying to note that with few exceptions the person in charge of such a bureau was formerly a teacher and is usually in close touch with the

training or supervision of teachers. Only with such a background can a person render genuine professional service in teacher placement.

The size of the placement staff varies considerably. The largest education association bureau (California) employs the equivalent of sixteen persons through the year; the largest state department bureau (Minnesota), six; the largest private agency reporting, twelve.

When the Bureaus Are the Busiest

Insofar as the number of employees reported by bureaus of state departments and education associations and by private agencies reflects the amount of placement work done during the various months, it may be concluded that the public bureaus make most of their placements from May to August inclusive, with the peak load in June and July. Private agencies are busiest during August, though the months from May to September show a marked increase over the rest of the year. The fact that the greatest amount of business for private agencies comes later in the season than it does for public agencies may mean that the former handle a larger share of the emergency calls and have a reputation with employers for more prompt action than the public placement office.

Placement bureaus connected with training institutions, state departments and education associations are so closely related to the parent organization that separate accounts are seldom kept and it is difficult to ascertain costs. Table I shows the costs for three different types of public placement agencies.

Figures in the second column of Table I represent the total cost of operating the bureau for the year. In the third column the total number of placements made by the bureau are listed, and in the fourth column the average cost per placement in each bureau is stated. The mean for nine institutions is \$17.73, obtained by dividing the total cost by the total number of teachers placed. The figures in the fifth column are those of the third plus one-half of the teachers "assisted," which means that

the institution sent credentials but was not the first to report the vacancy to the teacher. When these figures are used the cost per placement for nine institutions, as shown in the sixth column, is reduced from \$17.73 to \$15.86.

As the table indicates, the cost per placement for state departments is \$14.94, and for associations \$26.48. Comparing the costs per placement for the three types of bureaus, the costs for state departments are lowest, those for training institutions next, and those for education associations highest. The grand average is \$19.59 per placement, ob-

leading states: "We have seven licensed agencies in this state. These agencies placed last year 243 men and 525 women teachers. The commissions reported received for such positions total \$48,541.48."

These figures make the average commission paid by the teacher \$63.21. Aside from the fact that office rent and equipment are not included in costs calculated for public bureaus, this figure should be comparable directly with \$19.59, the average cost per placement found for public placement bureaus.

Placement bureaus of state departments and

TABLE I—COST PER PLACEMENT AS REPORTED BY SEVENTEEN TEACHER PLACEMENT ORGANIZATIONS, 1928-29

Organization	Total Cost	Number Placed*	Cost Per Placement	Number Placed and One-Half of Those Assisted†	Cost Per Placement
Institutions (9)	\$ 945	17	\$55.39	47	\$20.11
	7,000	160	43.75	191	36.65
	875	45	17.44	65	13.46
	4,235	300	14.12	312	13.57
	600	50	12.00	82	7.32
	255	50	5.10	50	5.10
	1,250	64	19.53	64	19.53
	1,300	90	14.44	112	11.61
	5,650	471	12.00	471	12.00
TOTAL	\$22,110	1,247	\$17.73	1,394	\$15.86
State Departments (5)	\$ 8,140	308	\$26.43		
	925	44	23.30		
	1,419	80	17.74		
	6,833	607	11.26		
	1,200	200	6.00		
TOTAL	\$18,517	1,239	\$14.94	1,239	\$14.94
State Associations (3)	\$29,284	1,007	\$29.08		
	1,266	44	28.77		
	598	125	4.78		
TOTAL	\$31,148	1,176	\$26.48	1,176	\$26.48
GRAND TOTAL	\$71,775	3,662	\$19.59	3,809	\$18.79

*This total includes only those directly placed.

†This total includes, in addition, one-half of those reported as assisted in securing positions.

tained by dividing the total cost of the seventeen bureaus by the total number of teachers placed by all of them. When the grand average is based on the inclusion of those "assisted" by the college bureaus, the cost per placement drops to \$18.79.

The actual cost to the teacher in all public placement bureaus is very low. In only eight of about fifty institutions do registrants pay anything directly for placement service. None of the state departments charges a commission, although four charge a registration fee of \$1 to \$3 a year. Association bureaus charge fees varying between \$1 and \$8, or commissions of from 2 to 3.5 per cent. One bureau charges from \$10 to \$20 if the candidate is placed.

The following data on private agencies are taken from the Division of Labor Statistics for one of our

education associations vary greatly in the proportion of placements to registrations. Many place from one-fourth to one-half of the registrants, while some place only one-tenth to one-twentieth. Institutional bureaus place a materially higher percentage. An urgent need of the many smaller independent institutional bureaus is closer cooperation among themselves.

The number of teachers registered in a state department bureau in relation to the total number of teachers employed in the state varies greatly, one New England state registering fewer than one out of every three and a western state enrolling more than one-half of all its teachers.

In 1929 teachers trained in Ohio were placed during the months of March to October. The median time of placement for eighty-seven Ohio

teachers was the last half of the month of June. According to superintendents, applications should reach them in April and the ideal time for election is during the month of May. Approximately one hundred Ohio superintendents voiced their opinions of the best time for elections, making their choices on such grounds as ample time for readjustment; opportunity to observe candidate teach; get best choice of teachers; close of school is a fair time for teacher and school; prevention of unrest and embarrassment. Twenty-five superintendents from Kansas and Minnesota favor the month of April for election.

According to all classes of placement agencies the three best sources of information concerning prospective teachers are the superintendent under whom the teacher has taught (if she has had experience), the supervisor of student teaching and the college teachers, although several other sources are recognized as valuable. It is significant that on this point there is general agreement among placement officials of institutional bureaus and of state department and education association bureaus and private agencies, although they differ concerning which of the three sources of information is most important.

Institutional bureaus name three uses for the information on registrants—credentials, general office use and earlier records. Credentials mailed to a prospective employer should be briefer than those available when he calls in person at the institution, and the latter records should be a condensation of the complete file of records kept for a student from the time of his application for admission to his graduation.

Frequently it may seem desirable to seek infor-

mation about the registrant from sources other than the references he gives. Private teachers' agencies write to other sources of reference as often as they limit themselves to references given by the registrant; public noninstitutional bureaus go beyond the references given in about one out of three cases. The placement officer's judgment should determine whether the registrant's record is complete when all the evidence from references submitted by the registrant is exhausted.

The preferred method of making contact between the superintendent having a vacancy to fill and the teacher seeking a position apparently involves three major elements: It should be known that a vacancy exists; the application should be made in person, and the superintendent should take the initiative. This practice is in harmony with opinions expressed by both superintendents and placement officers.

"Contacting" Superintendents and Teachers

Table II shows the relative value of thirteen methods of making first contacts between superintendents and teachers as rated by superintendents and placement officers.

Institutional bureaus usually suggest only one or two candidates for a vacancy, while noninstitutional bureaus and private agencies frequently suggest a larger number. Among all types of agencies the state department bureau is the most hesitant to take the responsibility for selecting a certain teacher for a given vacancy. This seems inconsistent in terms of the theory that certification is commonly accepted as a state function; placement is only a refined process of determining who shall teach and who is best qualified for a specific posi-

TABLE II—RELATIVE IMPORTANCE OF METHODS OF PLACING TEACHERS IN TOUCH WITH SUPERINTENDENTS, BASED ON JUDGMENTS OF OHIO SUPERINTENDENTS AND PLACEMENT OFFICERS

<i>Methods of Approach</i>	<i>Superintendents</i>	<i>Placement Officers</i>
1. Teacher makes personal application when called by school	156	39
2. Teacher makes personal application when vacancy is known	140	45
3. Superintendent calls for personal application of certain candidate	115	25
4. Teacher makes written application at random	99	16
5. Placement bureau sends specific credentials to the superintendent when vacancy is known	98	21
6. Teacher makes personal application at random	96	15
7. Superintendent calls for written application of certain candidate	91	23
8. Superintendent or board reports vacancy voluntarily to placement bureau	87	40
9. Superintendent asks bureau to nominate several from list of candidates	77	21
10. Superintendent asks bureau to select one candidate for a specific vacancy	43	25
11. Bureau sends general information on candidates when vacancy is known to exist	43	23
12. Bureau sends general information on candidates when vacancy may exist	37	14
13. Representative of bureau personally canvasses the school	1	9

TABLE III—BASES ON WHICH TEACHERS ARE SELECTED, ARRANGED ACCORDING TO RATING BY OHIO SUPERINTENDENTS

<i>Superintendents' Rating</i>	<i>Bases of Selection</i>	<i>Placement Officers*</i>	<i>Beginning Teachers*</i>
1	Impressions made by personal application of candidate	+	+
2	Health	+	+
3	Rating by superintendent or supervisor (if experienced)	+	+
4	Grades in major and minor teaching fields	+	+
5	Rating by supervisors of student teaching	+	
6	Prestige of person who is rating		
7	Considerable additional training in teaching fields		—
8	Written recommendation from home superintendent, teacher, etc.		
9	General rating by college teachers	+	+
10	Marks in general	+	+
11	Balanced program in subject matter, educational theory and student teaching		+
12	Activity record: member of varsity debating team, glee club, etc.		
13	Marks in education courses		
14	Additional general training		
15	Age	—	
16	Sex		
17	Training in related fields	—	
18	Impression made by student teaching when observed by prospective employer		—
19	Rating on intelligence tests	—	
20	Church affiliation		
21	Nationality		
22	Personal introduction to prospective employer by mutual friend		
23	Written recommendation from teacher's home banker, pastor, doctor, or other layman	—	
24	Personal introduction by a member of his home community		—
25	Prospective teacher's personal friendship with board		—
26	Personal introduction by an alumnus of teacher's alma mater		—
27	Written or personal recommendation by fellow college student	—	—
28	Impression made by asking low salary	—	—

*The symbol + means that the given basis of selection is placed in the highest quarter; the symbol — means it is in the lowest quarter.

tion. Most bureaus or agencies mail credentials at the request of either the registrant or the prospective employer.

Twenty-eight bases on which teachers are selected are shown in Table III. The ranking of over a hundred Ohio superintendents is used as a norm, though the judgments of placement officers and beginning teachers enter in secondarily. After the items are placed plus and minus signs which indicate that items so marked belong to approximately the highest fourth and lowest fourth, respectively. For example, "marks in general," ranking tenth in the list according to superintendents, falls in the highest quarter in the ratings of both Ohio placement officers and beginning teachers.

Forms Should Be Standardized

Blanks used in teacher placement received some attention in this study, but the investigation made was not sufficiently extensive to permit more than a tentative conclusion, namely, that a few basic blanks should be standardized, at least temporarily, the number being limited as far as is consistent

with effective work in placement. I believe that about six forms should be standardized—the registration blank, the teacher rating scale, the vacancy report, the folder of credentials, the teacher's application blank and the reference blank. Such a procedure would do much to remedy the lack of uniformity with respect to the items included and the internal arrangement of these items, and would eliminate the needless and somewhat expensive use of a large number of forms in the small placement office.

In order to build up the fundamental forms, the placement office of course must have a complete record of the prospective teacher, consisting of her college record and such facts from her high school and life experiences as reflect her personality, especially as a prospective teacher. To this information are added the registration blank, ratings as a student teacher or as a regular teacher if experienced and additional references from college instructors, laymen, or even fellow students or student organizations. These miscellaneous references make available specific information from

those who know the registrant, although only partially.

While the office records should be complete, it is suggested that credentials sent to prospective employers be somewhat briefer. The teacher's application should contain only the most fundamental facts, with some personal data added by the applicant. Just as the prospective employer is entitled to a clear picture of the applicant, likewise the placement officer, and through him the teacher, are justified in expecting from the vacancy report a fairly clear picture of the position to be filled.

Recommendations for Placement

Findings revealed by the study and recommendations for teacher placement are:

1. Public teacher placement organizations are most often termed "teacher placement bureaus."

2. Teacher placement officers are usually in close relation with teacher preparation. This helps to professionalize the process and lends support to the element of guidance of future teachers during their period of training which is strongly recommended by Toothaker.¹ Another study by French² further emphasizes guidance and the need of elimination during training of those not fit. Miller expresses a point of view opposed by some school administrators: "This bureau believes it is highly justified on professional grounds to help registrants to get promotions."³

3. Cost per placement by public bureaus was found to be slightly below \$20, which is slightly above figures given in several similar studies; in private agencies this cost was a little over \$63.

4. According to school superintendents election of teachers should be held in May, though the median time for actual placement was found to be June. Public agencies place a large number of teachers in late summer. Willett,⁴ in comparing private and public agencies, found that sixty-eight schools charged college bureaus with lack of promptness, although only three found that weakness in private agencies. On the other hand, about twice as many private agencies as public bureaus were accused of having too many teachers apply for the same positions.

5. The preferred method of placing teachers in touch with superintendents is that of "the teacher making a personal application when called by the school."

6. "The impression made by personal application of candidate" considerably outranks all others as a basis for actual selection of teachers.

7. It is highly desirable that a few of the most commonly used blanks for teacher placement be standardized.

8. Teacher training and placement are so inter-

woven with supply and demand that no program of professionalizing these activities can succeed without at least a partial solution of the former problem. Studies similar to those of Buckingham⁵ and others made later at Ohio State University should be made and acted upon.

9. Both superintendents and placement officers consider a code of ethics first among the various agencies by which teacher placement can be professionalized to a greater degree. The profession should move vigorously and seriously in the direction suggested by the committee on ethics of the profession of the National Education Association.⁶

10. On the basis of findings of this study and of those of earlier investigators⁷ it is recommended that teacher placement responsibility be assumed by state departments of education, primarily because it is a function closely related to teacher preparation and certification and to improvement of teaching in general.

References

¹Toothaker, O. H., *Basic Principles in Teacher Placement*, Education, April, 1927, pp. 472-482.

²French, Will, and others, *The Professional Training of Secondary School Teachers*, North Central Ass'n Quarterly, Dec., 1928, pp. 367-374.

³Miller, Clyde R., *Policies and Practices of the Bureau of Educational Services of Teachers College*, Teachers College Record, Jan., 1930, pp. 357-363.

⁴Willett, George W., and others, *Efficiency of Teacher Placement Agencies*, North Central Ass'n Quarterly, Sept., 1928, pp. 187-189.

⁵Buckingham, B. R., *Supply and Demand in Teacher Training*, p. 171. University Studies, vol. 2, no. 15. Bureau of Educational Research Monograph, no. 4, Columbus, Ohio: Ohio State University, 1926.

⁶Muir, Sarah T., and others, *Final Report of the Committee on Ethics of the Profession*, Abstract, National Education Ass'n Proceedings, 1929, pp. 179-190.

⁷Schrepel, Charles B., *The Placement of School Teachers Done by State Departments of Education*, unpublished Master's thesis, Department of Education, University of Chicago, 1920. McCarroll, Elizabeth, *A Suggested Program for Cooperative Research to Aid in the Promotion of a Central State Bureau of Teacher Placement in Ohio*, unpublished Master's thesis, College of Education, Ohio State University, 1929. Allen, Hollis P., *A Study of Teacher Placement in California*, p. 78, unpublished Master's thesis, Department of Education, Leland Stanford University, 1925.

An Experiment in Progressive Education

An experiment in progressive education is being sponsored by fifteen Harvard professors at the Cambridge School, Kendall, Mass., according to the *Survey*.

Marks, credits and formal procedure have been eliminated. After the brief morning assembly, there is a period of two hours with no bells, no regular classes, when each child must learn to plan out his or her work toward the accomplishment of an assignment outlined at the beginning of the month. Classes are used for teaching, not testing, and are marked by lively discussions.

The pupils spend an hour in the "hobby shop" in the afternoon. By means of a variety of opportunities for handicraft, the pupils discover the things they enjoy doing in their leisure time.

The school is coeducational. John R. P. French is head master.



Avoiding Pitfalls in Lunchroom Management

Losses can occur in such unexpected ways and places that the cafeteria manager must be constantly on guard to find and stop every possible source of leakage

By HOWARD L. BRIGGS, Director of Vocational Education, and CONSTANCE C. HART, Supervisor of Lunchrooms, Board of Education, Cleveland

“AN OUNCE of prevention is worth a pound of cure,” runs the proverb. Paraphrased to apply to the lunchroom it might read: “The successful operation of any public school lunchroom system requires a vision that foresees pitfalls and applies an immediate preventive to forestall catastrophe, the possibilities for which are many and varied.”

Many a large concern on closing its books finds it has nothing to sell but “good will.” The good will of some corporations has been purchased for millions of dollars. Good will is an intangible thing and easily lost. Efficient public school management must be continually alert to the possibilities of losing this necessary support of the

general public. Every lunchroom manager is continually forced to refuse some request impossible to fulfill. When the manager is tired and is faced with unreasonable demands, she is likely to fall into the pitfall of a blunt and hasty refusal, which may result in a smoldering resentment that manifests itself in unexpected forms and at a time when it may be extremely embarrassing.

In one community an overzealous manager competed with the sales of a local store to the extent that the irate store owner ran for the position of member of the board of education and was elected. Naturally one of his objectives was legislation pertaining to lunchroom operation. The fact that the personnel of the lunchroom department had

succeeded in maintaining the good will of the public in most other matters saved the department from an embarrassing situation. Patience and judgment are essential virtues in maintaining the good will of the buying and taxpaying public.

Good will must be maintained between the lunchroom system and the public, but the supervisor must retain the good will of all the lunchroom managers and they in turn must ensure a cooperative attitude upon the part of all the lunchroom employees. Good work cannot be accomplished with a disgruntled staff. Hasty and dictatorial decisions are resented. Previously thought out and well planned regulations are accepted as good business and preferred by most employees.

Not only is personal contact an essential element in successful lunchroom management, but judgment also must be used in the selection of menus. It is poor policy to offer large quantities of pork, ham and bacon to an 80 per cent orthodox Jewish community, and in centers where meat is not tolerated on Friday the wishes of the clientele must be respected. In large cities racial groups have a tendency to concentrate in definite districts. Their tastes must be considered and their palates appeased to a reasonable degree. A successful manager studies her school and devises menus that are salable. At the same time she maintains a professional attitude towards the dietetic values of the combinations she chooses.

One pitfall faced by the inexperienced manager is that of failing to make ends meet due to a lack of forethought in the ordering of supplies. One of the greatest opportunities for loss lies in purchasing quantities of perishable foods in excess of that which can be consumed during a given period. To illustrate: It may appear good economy to purchase oranges by the crate since the cost is lower than by the dozen. Oranges, however, are perishable in certain temperatures. The actual spoilage during the time in which the oranges can be consumed may be in excess of the actual saving made by large quantity purchasing.

Be Careful in Buying Fruit

The manager further should have a knowledge of qualities that will enable her to accept fruit ripe enough to use and not too ripe to prevent its lasting a reasonable length of time. Judgment in the selection of bananas is a typical example of this. The manager, too, must know how to store fruit in large quantities so that it will not ripen too rapidly. She should have the facilities for keeping it at the approximately desired temperature and humidity, and, again, she must continually sort quantity packs so that any decayed units may be immediately removed to protect the remainder

from rapid spoilage. One bad apple in a box may infect the whole pack within a few days.

Careless judgments in quantity purchasing may lead to an excess inventory at the end of the year which will result in definite losses. Quantity purchasing may further result in a week-end surplus of perishable food which must be disposed of at a definite loss, either through serving an excess amount to the purchaser, by selling to the employees at a loss or even by giving it away to lunchroom workers. This again leads to unexpected pitfalls.

Small Leaks Make a Big Difference in Profits

The public is critical of public school lunchroom management. The Cleveland central office has received repeated calls from observing taxpayers who announce that if a certain lunchroom is watched late in the afternoon the employees will be found stealing large quantities of food for which the taxpayers have paid. Investigation proves that the employees have duly paid for this food. This again raises the question as to whether it is desirable at all to sell food to lunchroom employees, since any process is subject to gross misinterpretation. At the same time the practice may lead to abuse, since it is impossible to ascertain accurately what is purchased and what is stolen. Experience has led to the rule in Cleveland for the coming year that lunchroom managers are to prepare food in small enough quantities to assure that it will not be necessary to sell surplus food to lunchroom employees at the end of the week. The experienced manager may so plan the menu for the last day of school that she will have approximately enough food to cover an average day's sale and make her replacements, if an excess of food is necessary, from an emergency shelf wherein a supply of canned and preserved food is maintained to relieve such situations; or she may use foods that will keep over the week-end and be adaptable to service in some other form. Baked ham is a possible illustration.

One example of waste came to the attention of the Cleveland management in which a cook had deliberately prepared larger quantities of soup than was necessary on Friday so that the employees could take it home at the end of the day. Employees have been known to depend on the lunchroom for their three meals. A definite cash value in food should be allowed and a record should be kept. The dishes that are likely to become leftovers may be frequently consumed by employees for their noon lunch. Out of season vegetables and fruits and the more expensive cuts of meat occasion losses when served to employees as a luncheon.

Petty thievery is always a possible source of loss. In a system operating with an absolutely tight margin of profit and loss, small leaks make a definite difference in the final outcome. Records of all future employees should be scrutinized carefully, and the manager should not leave the lunchroom until all help has left. Bundles to be taken from the building should be inspected by the manager at the close of the day's service.

A well organized system of accounting where percentages are allotted against food and labor will indicate any great food shortages. In the Cleveland system the central office has been able to detect sources of loss through a careful scrutiny of the books of the individual lunchroom. It was found in one particular lunchroom where a loss in operation occurred each month, that although the quantity of food served over the counter and the quality were not high, the food percentage was. This definitely indicated that food was purchased which did not reach the consumer. The central office took over the management of this particular lunchroom for a period of time and the losses continued. Still sure that it was on the right track, the office ordered a careful inspection to be made of the locks. It was found that a staple on the ice box lock had been tampered with so that, although the box was locked, reasonable pressure would remove the hasp. As a result, the contents of the ice box had been systematically pilfered during the night hours. When this lock was repaired, the lunchroom showed no further losses.

This Is a Great Time Saver

One way to prevent petty thievery is through a carefully arranged and organized supply room. "A place for everything and everything in its place" facilitates a rapid inventory of goods on hand and assists in detecting missing articles. Cans and miscellaneous containers properly labeled promote orderliness. Shelves should be constructed to accommodate sizes of cans that are commonly carried in stock. Perforated stencils may be used in labeling cans to indicate the contents and the weight of the container. This is a great time saver when the contents are weighed during inventory periods. It is desirable to have one individual responsible for the storeroom who, in turn, must keep accurate records of all supplies added or withdrawn from time to time.

When ordering supplies, some lunchroom systems insist on having goods packed in special package sizes and weights for convenience in handling. To illustrate: Some coffee urns may require ten ounces of coffee for each charge. If the coffee is packed in bags of this size there is no labor involved in weighing a batch of fresh coffee, and

uniformity of product is assured. Some commissaries deliberately weigh all bulk goods in small unit packages to assure a more accurate account and to save the time of workers by making available standard quantities for use in recipes. In the stocking of large bulk units, such as barrels of vinegar, withdrawals should be entered upon some record card, which will give constant information about the amount on hand. The proper moistening or chilling of fresh vegetables is an element in the prevention of spoilage and its accompanying loss.

All Deliveries Should Be Checked

Careless checking of food deliveries is another element of loss. In one school the manager weighed a bag of potatoes and found it many pounds under weight. The delivery boy quite honestly stated, "I am sorry, this bag was not meant for your school; it was to go to such and such a school." Immediate investigation of the other school proved that the manager never weighed the potatoes and the commission merchant had discovered that he could always "get by" with "short weighing" this particular manager. In making the blunder of sending the delivery intended for the careless manager to the careful one, the merchant's thievery was discovered and he was discredited as a bidder. All deliveries should be carefully checked for weight and amount and a record made against the original order.

Careless accounting upon the part of the individual manager is another element of loss. Records must be accurate. Help cannot be depended upon to take the responsibility. The central office should occasionally take inventories to ascertain the carefulness of managers. In one recent inventory of silverware taken by the central office, under "spoons" the manager showed the original inventory at the beginning of the year as 600 and her inventory at the end of the year as 650. The actual count indicated 540, which not only showed an unnecessary loss of silverware but also a careless checking on the part of both employee and manager. It also revealed that the manager had not even checked the inventory of the employee in question. A follow-up revealed a second silver order which had not been properly entered on the inventory record. Central office checking brings such matters to the attention of careless managers and assures accuracy in the field, thus curtailing losses.

The "big hearted" manager usually ends with a deficit. Her desire to retain the good will of customers and help may result in difficulties. One of her employees has a large family and the husband is out of work. The manager kindly donates to her at the end of the day the food that is left over. This

would be all right if the food belonged to the manager, but it does not. It is the property of the school children of the community and is paid for by them.

Equipment is costly. It must be taken care of. It should not only be carefully inspected by the manager and a careful inventory kept of all units, but the central office should also check and frequently inspect it to assure that it is properly maintained. Adequate repairs are cheaper than "letting it go." A dripping faucet runs up the water bill to a surprising extent, and a leaking steam valve burns unnecessary coal. A rusted table top may soon cease to be a table if it is not retinned and the legs painted. Continual care may salvage many a piece that otherwise would be discarded. Employees soon reflect the attitude of the employer. If it is one of carelessness, equipment will be treated carelessly.

Cleveland has made comparative studies of breakage over definite periods of time and managers are thus given an opportunity to study their losses in comparison with those of other schools. The decrease in the amount of broken equipment has been surprising since this system was inaugurated. This care has resulted in a decrease in the operating costs and also in prices to the consumer.

How much work should the average employee turn out for a given period? This is a problem that requires both experience and research. Centralized management soon discovers through a study of its records the number of employees required for a given output. Supervision detects wasted motion. The employee who has no work for ten minutes is a definite cost for that period. The trained manager is constantly alert to avoid labor loss, but she is much better able to judge what she should expect from an employee if she has comparative data from other institutions in which the food output is equivalent to her own. Equipment is utilized so that its use does not overlap. Every worker is always given definite tasks and assignments and cheaper labor performs the routine jobs. Tact, instruction and cooperation will greatly increase the work done by employees. Workers seldom take advantage of one who knows what they are expected to accomplish.

Sharp Knives Save Time

The careful location of equipment saves waste motion, and sharp knives save time. Instruction on quick methods of handling foods is good economy. In the slicing of vegetables, the use of a board plus making all cuts in one direction first and then all right angle cuts speeds up the output. A considerable saving can be made in labor by utilizing employees during slack periods on work

which would otherwise be done the next day. These tasks could include the cleaning of silver and the preparing of spinach on the afternoon of the day preceding its use, the spinach being washed and placed in bags near the ice. Apple or rhubarb sauce may be made or bread crumbs ground. The dishwasher may increase her output by stacking all dishes of a size together. Then, too, accurate information on the right amount of washing compound to use and instructions on how to operate the dishwashing machine save time and effort. The efficient manager soon detects and eliminates the slacker.

When a Scoopful Is Not a Scoopful

A source of loss in the service of foods arises from carelessness in quantities served over the counter. A scoopful is not of necessity a scoopful. One manager serving whipped cream on a dessert was using it in such quantities that each sale actually cost her two cents. Even the sandwich contents should be predetermined and measured, and the use of a spatula "speeds the spread." The careful manager checks such details and informs her help of the exact quantities that she is supposed to serve at a given price when standardized menus are used and quantities predetermined. Where profit and loss are a matter of mills rather than pennies, accuracy is of prime importance in measuring the quantity served over the counter. The central office should make available to all managers accurate information on the number of services to be made from any predetermined quantity of food.

Waste within the kitchen is another pitfall. A check of the help cutting the eyes out of potatoes revealed that there was a variation of 20 per cent in the actual bulk of mashed potatoes available from the same original quantity. There was no great variation in the quality of the original potatoes since they were delivered from the same wholesaler at the same time. Haste can make waste when good food is thrown away. A stock kettle may be kept continually simmering to utilize meat trimmings, the liquid in which vegetables have been cooked and other "valuables" that otherwise might be thrown away. Left over celery tops make an excellent flavoring for vegetable soup. Flour and sugar may be spilt in such quantities as to become costly, and butter and eggs may easily be used to excess. Careless mistakes may result in throwing away an entire "batch," and failure to observe the range may result in the burning of many dollars' worth of materials. A well trained manager plans menus so that leftovers may be utilized the following day. The ways are many and devious in which a skilled cook may utilize

leftovers and serve them in a healthful and appetizing new form.

Food that is left over can be made much more appetizing for a second day's serving by the addition of new materials. A pan of macaroni is greatly improved by a layer of fresh macaroni on top. Additional servings can sometimes be obtained through care in the method of serving. Spinach when cut with a spoon packs down and is less appetizing. Lifting it with a fork separates it, makes it lighter and more appetizing and assures a greater number of servings.

The proper use of machine equipment is of great assistance in avoiding labor losses. Even the humble hash has graduated from the hand chopping stage to the grinder and the mixer.

Labor may be saved by preparing the roux at the beginning of the week and placing it on ice. It may then be mixed at any time with hot milk or meat stock for gravies or sauces. This latter mixture may be made in the bain marie, thus saving gas and leaving the stock kettle and stove for other uses. Bulk pan frying may be accomplished more economically in the oven since larger quantities can be handled at a time. The preparation of fried fish is a good illustration of this. The cook thus is left free to do other things. Broken candy and pieces of chocolate can be melted and utilized in frostings, ice cream and sauces. When strawberries are expensive, tapioca may be used to advantage in fillings and cream sauce will make asparagus go further. Vegetables will keep longer if the white sauce is not added until served. Stale cake may be dried, rolled and crumbs mixed with nuts for spiced cake or kuchen. If the older bread is served first there is less opportunity for stale bread to accumulate.

Don't Let Your Job Become a "Habit"

It is too frequently assumed that a lower price cannot be obtained from contractors selling to the lunchroom department. The proper handling of competitive bidding may be utilized to bring down prices to a minimum. It is sometimes wise to sell foods of high dietetic values at cost and to make all profits from foods that are not so healthful, but that are insisted upon by the purchasing pupil.

Another pitfall is the possibility of the manager's becoming so accustomed to her job that it becomes a habit and she fails to maintain the scrupulous cleanliness that is so absolutely essential on public school service. The most remote crack, although rarely seen by the public, should be inspected and cleaned as thoroughly as a plate or the counter itself. Carelessness in the matter of cleanliness cannot be tolerated. Plates coming from the dishwasher should be repeatedly in-

spected to ensure that no deposit from the solvents used remains upon the surface. Aluminum trays have a tendency to acquire a metallic smudge which is far from pleasing to the customer if it is transmitted to the hands or clothing. Silverware should be polished at reasonable intervals. Kitchen utensils should be constantly inspected. Every effort should be made to maintain cleanliness. In spite of cleanliness, vermin are sometimes delivered with the groceries. One bug "prominently active" may permanently eliminate a dozen customers. Contracts with exterminating companies should be maintained and the management should be continually on the watch for "new arrivals."

Check These Points to Prevent Losses

Managers' meetings frequently result in cutting costs. A committee report on ways and means of avoiding pitfalls was conducted in Cleveland and resulted in a summary of lunchroom losses which was circulated to all managers. The topics included were:

1. If your lunchroom were losing money, what are the first steps you would take to correct this condition?
2. What items may be checked to reduce costs on the pay roll?
3. What can be done to utilize slack moments of time?
4. What short cuts may be taught to save time for (a) your pastry cook, (b) your meat cook, (c) your vegetable cook, (d) your sandwich maker, (e) your salad maker, (f) your dishwasher and (g) your counter worker?
5. How can a high standard of food—quality, flavor and appearance—be maintained in your lunchroom?
6. How do you plan your menus to suit the needs of your special community?
7. How can the cost of food be controlled in the raw and the cooked states?
8. What are the disadvantages of overproduction?
9. What are the disadvantages of underproduction?
10. How may overproduction and underproduction be controlled?
11. If you were assigned to a new school, how would you increase the volume of business?

Answers to two of these questions are presented here.

In answer to the question, "If your lunchroom were losing money, what are the first steps you would take to correct this condition?" the following suggestions were offered: watch leftovers; watch servings at counter; watch food being wasted; check menus; check salad dressings and

whipped cream as garnishes; check recipes to see that standards are being used; have food prices correct; check inventory and not overstock; check weights on meats and vegetables; increase volume of business; order economically in highest quantity that is practical for the lunchroom; check overproduction; serve seasonal foods; check cleaning supplies; control amount of food to be served by giving quantities to different workers; serve foods involving minimum amount of labor; check cash register, cashiers and checkers; check women workers to see that there is no stalling; check honesty of help; check food consumed by help; check packages carried home at night; utilize time to avoid a high percentage of help; watch workers for efficiency, getting rid of poor workers or those too old; use less variety and simpler foods; have cheaper workers for the routine work; plan menus so that too much time will not be taken for preparation; utilize equipment so that one woman's work does not overlap another's; keep equipment in order; use most workers at the noon period when business is greatest; see that a definite amount of work is done in a definite length of time; check time (in and out) of women so that there will be no unnecessary hours.

How to Increase Business

To the question, "If you were assigned to a new school, how would you increase the volume of business?" various managers said they would accomplish it by studying the situation and gaining knowledge from employees; by studying children's likes and dislikes; by serving only products of high quality; by always having enough for all; by serving at least one popular dish each day; by serving new things to hold interest of children; by never repeating a menu as a whole; by improving the quality and the appearance of the food; by offering specials; by advertising special menus on bulletin boards and school papers throughout the school; by cooperating with other departments in school; by speeding up the efficiency of the service and the handling of trays; by improving the general appearance of the lunchroom; by stressing cleanliness and orderliness; by personally supervising all lunchroom operations; by training counter servers to be good salesmen in their particular sections; by buying according to the nationality and financial conditions of the community; by watching the popularity of various types of foods; by observing the food habits of certain communities, especially Jewish or Roman Catholic; by serving different styles of food combinations; by giving children food of highest nutritive value at lowest cost; by giving talks in various home rooms, emphasizing the types of food children should eat and by serving

these foods in lunchrooms; by making counters attractive at all times; by tasting all food to be served; by studying color schemes and serving one bright food in each group each day; by refusing to serve foods of similar flavors or textures; by assuring good, appetizing food at a low price; by occasionally including unusual foods; by visualizing the menu to make it appeal to the eye; by planning attractive combination plates; by displaying well seasoned and well garnished foods attractively on spotless and stainless counters.

Be Prepared for Any Emergency

The field of lunchroom management may be compared to the battlefields of France, whereon ambulance drivers were obliged to travel at high speed without headlights. They were never sure where previous shell holes existed or where new ones were likely to occur. Those who went through the experience claim that they developed a form of alertness that seemed to sense possibilities of disaster in the darkness. The competent manager of the public school lunchroom must possess that interest and alertness that will enable her to be prepared for any emergency and avoid all pitfalls even though they may come upon her unexpectedly. Ambulance drivers avoided sudden holes appearing out of the darkness through extreme skill in driving, which was in turn based upon a technique resulting from both practice and training. The successful lunchroom manager makes a definite objective of being prepared, exerting initiative, observing the most minute details and predetermining all outcomes.

The ambulance drivers of the war had a definite service to perform which carried them through the most trying situations. The public school lunchroom manager cannot afford at any time to lose interest in her work or fail to realize that the work she performs is of definite social service value; else she will fall asleep at the wheel and find herself at the bottom of a pitfall too deep to climb out of unharmed.

School lunchroom management on a large scale is practically a new vocation which must inevitably enlist and train a new type of worker. It is a professional job. Scientific management must replace trial and error methods. Few training institutions to date have enough available data to organize courses which will adequately prepare individuals for this new public service vocation. In this series of articles it has been the objective of its authors to make available to those now employed in the field and those who would enter it the information they have accumulated through practical experience on the job and through tumbling into and climbing out of many pitfalls.

Where School and Community Work Hand in Hand

By BERNICE ELLIOTT, Michigan State Normal College, Ypsilanti

This department of rural education is conducted by Helen Heffernan, chief, division of rural education, state department of education for California, Sacramento.

IN THIS period of storm and stress when public schools all over the country are struggling for their very existence, public relations programs become of increasing importance. Teachers who once felt themselves to be sole arbiters in the schoolroom, needing no further justification for their acts than the approval of superintendent or supervisor, are today realizing that it is after all the taxpayer of the community who gives the final word, passes the final judgment and snaps off the head of superintendent or supervisor without too pronounced hesitancy.

In some cases this may be a hard lesson but it may be a wholesome one. Parent-teacher association and community programs are without doubt more essential than they may appear to be on the surface. And the duty of the school to the parents of its pupils, seeming perhaps the least pressing of many duties, may be the very one to be overlooked.

Moreover, the economic aspect is not the only

one to be considered. With the emphasis in education shifting from the consideration of the purely intellectual endowment of the child to include his emotional and character traits, for which the home is largely responsible, the need for a closer association between the parent and the school grows increasingly apparent. Parental education becomes of paramount importance.

As an example of a school well on the way to solving many of the major difficulties that beset the path of those interested in a closer rapprochement between school and community, one might cite the Lincoln Consolidated Training School, near Ypsilanti, Mich. This school, in the less than ten years of its existence, has established a community organization that may profitably be studied by other schools of the country. It provides a striking example of what may be done with a well directed activities program.

To understand just what place this program has

One of the first projects undertaken by the adult citizenship league was that of landscaping the school grounds. Here we see two of the seventy men and boys who took part in the "landscaping bee," grading the school yard, while the wives and daughters prepared dinner in the school kitchens.



had in the life of the school and the community it is necessary to know something of the history of the school itself.

The consolidation of the thirteen districts that coalesced to form the Lincoln school was the result of enthusiastic endeavor on the part of members of the faculty of the Michigan State Normal College, Ypsilanti, notably President Charles McKenny and Dr. M. S. Pittman. These men, possessed of vision and progressive educational ideas, realizing that this is the day of the rural consolidated school and feeling the lack of adequate practice facilities on the campus, saw the possibility of an educational experiment that appeared feasible. The school districts would erect a modern school building and the college would man it. As the result of a discussion with school officers, a committee was appointed to go before the state board of education. The board agreed to supply a teaching staff for the building.

In spite of this bright outlook for improved educational opportunities for their children, there was dissension in the community regarding the proposal. Some were not sure that the college would keep its part of the bargain. Others, remembering their own limited schooling gained under primitive, pioneer conditions, saw no necessity for anything better. As a result, neighborhoods were split, families divided. The first bond issue of \$190,000 passed by a majority of only thirteen.

It was obvious that something more than mere facts was necessary. An educational program had to be started which would proceed with full knowledge of the underlying currents in the community but which would at the same time ignore them.

Henry A. Tape, principal of the school, considered various plans and finally worked out the Lincoln Community Citizenship League. The main purpose of the league was to establish the sort of continuity expressed in "from the cradle to the grave," beginning in the elementary school and continuing through graduation into the practical life of the community with no abrupt transition.

Sound Psychology Governs Policy

"We must start with people where they are and bring them to appreciate what the schools are doing," Mr. Tape said in speaking of the plan. "Education is growth. Such a program works slowly. We cannot expect good citizens tomorrow or the day after tomorrow. Efforts have to be continuous. While there may be some direction, the less in evidence it is, the better."

In other words, the league was based on sound psychology. Points of difference were to be ignored, mutual service was to be rendered. Too much was not to be expected as an immediate result. It was

a case of "*L'important n'est pas de marcher vite, mais de marcher toujours.*" It was the philosophy of an artist—here, the artist in human relations.

Both in organization and spirit, the Lincoln Community Citizenship League was to be democratic. Children in the elementary grades made up an elementary citizenship league with executive and legislative groups. Representatives from all elementary rooms including the kindergarten constituted the council or legislative group. It has been found advisable since, however, to divide this council into two groups, one for the children of the first three grades, the other for Grades 4 to 6. The smaller children need more teacher guidance and often become submerged in a larger group. Sometimes the groups meet together. It is also thought practicable and even valuable to bring the adult group occasionally to elementary meetings.

The junior citizenship league, composed of representatives from the junior-senior high school, is a repetition of the elementary league with the exception that it meets each week. The elementary council assembles for the most part on call or for specific tasks.

How the Adult League Functions

To complete the organization, the adult citizenship league composed of four officers elected from the community at large makes up an executive group which carries into effect those measures inaugurated by a council of representatives from each organization of the district, including six churches, two Evangelical, two Methodist, one Quaker and one Catholic, the Woman's Christian Temperance Union, granges, gleaners, members of the board of education, the faculty and the president of the community league as ex officio member. Since the first the principal of the school has acted as chairman of this legislative group.

The first question before the adult league was: What shall we do for the social, economic, educational and religious welfare of this community? It was decided to hold a general community meeting once each month in which all members of the community were to participate.

One of the first projects undertaken by the league was that of landscaping the school grounds. The council took over this project, organizing a bee in which in one day some seventy men and boys took part. While the men worked outside, their wives and daughters prepared dinner in the school kitchens. In two or three days the volunteer labor band had graded the lawns, dug the drive and planted the shrubbery. Yet these obvious achievements did not represent all that had been accomplished. The people of the community were beginning to feel that this school was indeed their own,

something worthy of working for, something to be proud of.

A second project of the first year was tree planting. A community tree planting day was arranged for and trees set out in the twenty-acre lot at the rear of the school building. A tree was planted for each of the original thirteen districts, around another which was to stand for the consolidated school. Trees were also planted for each of the

fought like h— to prevent this building going up, but I'll fight like the devil to get it back." Although the original building was almost completely covered by insurance, the community voted an additional \$100,000 for a new fireproof building, one-third larger than the old one. This time the vote was carried by a 116 majority.

The next difficulty that was met and solved was that of transportation. The taxpayers were unwill-



Shop work at this school is on a practical plane, in keeping with the rural needs of the pupils.

early pioneers and their families. Afterwards those who had come more recently to the district requested that they might also have the privilege of planting family trees. A little later, a horticultural orchard was set out containing peach, pear, apple, cherry and plum trees, all the varieties of fruit especially adapted to the section. The school now has 400 trees to its credit.

At the beginning of the second year, the new building burned. As the people of the community gathered around the blackened ruins one idea seemed uppermost. Another building must be built as soon as possible. One old fellow remarked, "I

ing to buy the facilities necessary for transporting children from their homes to the school until it was demonstrated that the private enterprise method was costing twice as much as community managed and owned facilities. At the end of three years the change was made to community owned busses. At present the community owns the entire fleet of seventeen busses and a \$12,000 garage. Transportation expenses have been more than cut in half. To direct this important phase of the consolidated system, a superintendent of transportation is employed on the same basis as the faculty. In addition, fifty-one children, three to a bus, serve as

citizen officials for pupil control to and from school. They have charge of reports regarding absence and keep order, reducing the discipline problem to the minimum.

For a number of years the adult league sponsored a lyceum course for which from 500 to 800 tickets were sold annually. The course was discontinued, however, as the organization made use of

COMMUNITY AND SCHOOL ACTIVITY CALENDAR
OF THE LINCOLN CONSOLIDATED TRAINING
SCHOOL, YPSILANTI, MICH.

Sept.	8	9:00 a. m.	Meeting of all Lincoln faculty at Lincoln school, Room 312
Sept.	9	8:50 a. m.	High school pupils only. All day session
Sept.	10	8:50 a. m.	Elementary pupils only. All day session
Sept.	11	8:50 a. m.	High school and elementary pupils. All day session
Sept.	12	8:00 p. m.	Home-coming. Welcome to faculty and new families of the community. Exhibition of flowers, fruits and vegetables. Direction of community league
Sept.	19	8:00 p. m.	Reception to tenth grade, by eleventh and twelfth grades
Sept.	26		Church night
Oct.	11		Community stock and poultry show. Boys' and girls' club exhibits. 9 a. m. to 4 p. m. Pot luck dinner
Oct.	31	1:45-3:15	Junior high school Halloween party
Oct.	31	8:00 p. m.	Senior high school party
Nov.	14	8:00 p. m.	Community night. P. T. A. meeting
Nov.	21-22	8:00 p. m.	Junior play
Nov.	26	4:00 p. m.	School closes for Thanksgiving recess
Nov.	26	8:00 p. m.	Alumni party
Nov.	28		Church night
Dec.	3		Community play and group discussion night
Dec.	5		High school basket ball. Home game
Dec.	10		Community play and group discussion night
Dec.	12	8:00 p. m.	Senior high school party

the increasing amount of its own talent. A Little Players' League was developed which presents plays under its own direction.

School and alumni bands began to function in the community life, the alumni band containing sixteen to twenty pieces and elementary and advanced school bands, thirty-five pieces each. A community chorus led by the supervisor of music provided an

opportunity for those interested in vocal music. This chorus gives operettas and cantatas, takes part in annual Christmas programs and provides music on other occasions.

A series of agricultural fairs, short courses, exhibitions of labor-saving devices for home and farm and stock and poultry shows have been carried on under the joint direction of adult members of the league and agriculture classes. The school garage is used for the stock shows and as many as sixty head of cattle have been kept indoors in bad weather. In the stock show, a friendly rivalry obtains. Boys judge against fathers, fathers against sons. Feed exhibits have been held and balanced rations shown and explained by agriculture students.

Members of an athletic club play basket ball in winter and baseball in summer. During the summer season, four teams, the Robins, the Cubs, the Phillies and the Cardinals, play a series of tournaments, the games beginning at 6:30 a. m. and lasting for seven innings, the weather permitting.

In summer also, outdoor union church services are held on the school grounds.

In the winter of 1931 the first community night school was inaugurated. It proved so popular that it was continued for the second year. One hundred and sixty-five persons, ranging in age from sixteen to seventy-one, were enrolled. This figure does not include the enrollment for play night and the athletic club, which have a joint membership of about fifty-five. The education of those in the night school group ranged from sixth grade to college degrees. The night sessions were held twice a week for four weeks beginning the middle of January. Classes were scheduled for eight o'clock and closed promptly at ten. For the twenty-minute assembly program that preceded the two class periods, outside speakers were brought in to discuss modern problems.

What the Night Classes Studied

Courses selected by the community for night school study were: community chorus, a continuation of the Lincoln Community Chorus; Bible study; livestock feeding; child study for mothers; elementary electricity; easy English for foreign born; helpful studies in home economics; horticulture and market gardening; expression class, designed by the instructor to give opportunity for a discussion of the topics of the day, a substitute for economics; home art; interesting things in modern science.

It is interesting to observe that the home economics course took the form of a cooking class. In a community of good cooks this more than indicates confidence in a home economics program.

The yearly stock show is carried on under the joint direction of adult league members and agriculture classes. A friendly rivalry exists, and boys judge against fathers and fathers against sons.



At the end of the course, the women contributed their favorite recipes to be made up in a little booklet which sold for a dime.

At a community meeting in the spring about one thousand children and adults gathered at the school for an achievement program. Classrooms were thrown open. Parents, children and taxpayers without children of school age or childless¹ passed in and out of shops, agriculture rooms, art rooms and laboratories where exhibits were arranged. Faculty and student teachers were present to welcome the guests. Children were there to explain the exhibits.

As a feature of the program, seven couples of the community, married more than fifty years, crossed the stage to receive bouquets of sweet peas in recognition of their achievement in living. One old couple wearing the wedding garments of fifty-eight years ago was accorded the applause merited by a quaint and charming appearance. At the first community meeting in the fall couples who have passed their silver wedding anniversary will be honored in like fashion.

The accompanying page from the community and school activity calendar, arranged in mimeograph form for the entire year, illustrates how closely the interests of home and school are bound together.

This unity is as apparent in the everyday give and take of the school as it is on paper. Sitting in at a meeting of the elementary council, one is impressed by the serious attitude of the children gathered to consider problems concerning the well-being of the entire school, problems which they as well as the older pupils can help to solve.

At a meeting in February when the cold epidemic was at its height cold prevention was the subject under discussion. This was introduced in a natural way by the elementary teacher in charge,

¹There are 517 families in the district, 237 of which are without children in school.

who referred to the number of council representatives who had to be replaced because of absence due to colds. Donna, a kindergartner, said that children should always cover their mouths when coughing or sneezing. Calvin suggested that signs be made reminding children to do this. The third grade representative said he thought people should be reminded to keep their mouths off drinking fountains in order to avoid spreading germs. Reports were given by others to the effect that children with colds should not hold their handkerchiefs in their hands during school hours but should keep them in their pockets or in the desks; also that clean handkerchiefs were needed every day. The first grade, in addition to discussing the cold problem, felt that care should be taken at lunch periods to keep crumbs off the floor and chairs and to keep the voices soft.

When all the children had been given an opportunity to express themselves, the school nurse who had been invited to attend the meeting summed up the suggestions that had been made and emphasized the need of greater care on the school bus.

One of the children acted as chairman while a vote was taken as to the advisability of using health posters. It was decided that since the problem was so big the help of upper elementary and high school councils was needed. A meeting was called for the following day at which representatives of the upper class groups were to be present. The meeting was held. If the epidemic was not relieved immediately at least all measures were taken by the members of the league that would have been taken by more august bodies.

While the children on the elementary level participate in a smaller way than do those of the upper grades they are learning to live through attempting to solve their own problems. As they grow older their responsibilities increase and their ability to meet them increases. The problems of elementary children grow out of their activities in

their schoolroom and at home. Later their horizon widens.

High school pupils have interests outside their immediate environment. They discuss such things as care of the grounds and the building and participation in social functions.

A Product of Citizenship

A well poised alert young person, introduced as the president of the junior citizenship league, described to me some of the projects undertaken during the past year. She spoke easily, enthusiastically, apparently oblivious of the fact that she sat in the principal's office opposite the principal himself. And she was well informed. She outlined the work of the league without hesitation and seemed to understand implications on an adult level. She was a senior but that alone did not explain her to me. At a glance one saw the product of citizenship developed slowly through the formative years.

She spoke of the Lincoln School flag, blue with a gold torch symbolizing the thirteen districts of the consolidation; described how sketches were submitted for approval and voted upon; how the flag itself was made by pupils of the school. She spoke of the pleasure and profit gained from a recent meeting with council members from other schools in the Huron River section, of the exchange of ideas for mutual benefit. She spoke of the approaching honor banquet, of the school board and parent guests. Then she said, "We are trying hard to find some way of giving awards for citizenship as well as for scholarship. Why shouldn't we? Isn't citizenship important?"

A committee of high school pupils meets with a faculty committee to plan assemblies which are an outgrowth of pupil activities. Assembly speakers are introduced by pupil members of the league. Pupils participate in the life of the school as they will be called upon to participate on another level at a later period of their lives.

Since the depression has brought poverty and want to some homes of the community, the school organization has helped to pay for lunches for the poor by means of benefit basket ball games; clothing has been donated and reconditioned by members of the faculty and community. People do not work together without absorbing something of each other's point of view.

The Lincoln School community is not unusual. It is merely a good average agricultural community. Most of the people in the district are interested in market gardening. Some are of foreign birth and work as laborers in the city. The backbone, however, is old pioneer stock just as it is in other rural communities of the United States.

Painting Up in the Face of Depression

By GEORGE CARL WELLER

Vice-Principal, South San Francisco Junior-Senior High School, South San Francisco, Calif.

What school administrator does not enjoy seeing his school building touched up with a little paint at least once a year—either during the summer vacation or during the Christmas holidays?

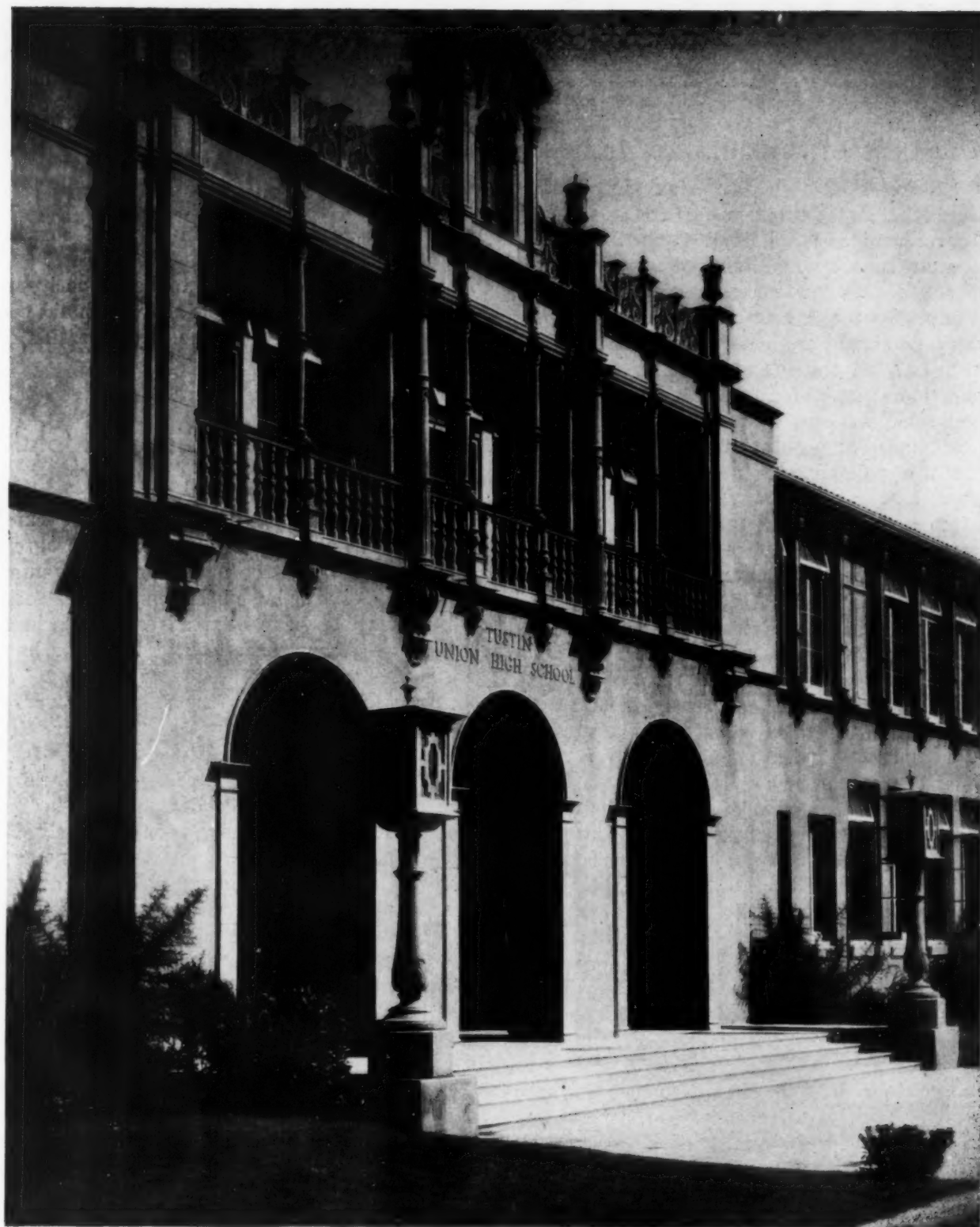
As the old saying goes, "A little paint covers up a lot of sin." And there is surely plenty to cover up in a schoolhouse in the way of finger prints, pencil marks, ink stains and general smudges. The wise administrator will see to it that this paint actually goes on at least once a year. The corridors, the dados in all the rooms, the stairway walls, the blackboards (those that are not slate), the lavatories, the showers, the gymnasium walls, the cloak rooms, the lunch rooms—all these can be placed in first-class condition by a little fresh paint. And the cost is so little!

In the South San Francisco Junior-Senior High School, summer touch-up painting has been carried out every year for five years under a regular contractor. This year, however, with a shortage of funds, it was necessary to look about for a new method by which to carry out the regular plan. Three different groups were involved in carrying out the plan—the principal, the paint company and the janitors. The principal worked out the plan and sought the advice of the other two groups.

Generous Cooperation and Its Results

Before the close of school, representatives of the paint company called at the school for the purpose of determining the kinds of paint needed, the colors, the quantities and the time of delivery. On the first day of vacation the paints arrived. The janitors had agreed to try painting, although neither had done painting on a large scale or painting of such importance. They succeeded, and while it took a little longer, the work has nevertheless been done expertly. Instead of taking their regular vacations, they have done this painting in addition to their summer duties without any extra pay. The cost of the regular summer touching-up has been cut to about a fourth of the usual amount.

Human nature is much the same in all sections of the country, and no doubt other administrators who investigate this plan will find accommodating paint representatives and willing janitors. And how pleasant the effect will be on the students and teachers when they return after the vacation. It has been said that the economic condition of the country is largely psychological. Clean, bright, fresh and colorful workshops will assist in driving away the "depression" obsession.



This California School, of Spanish architecture, appropriately follows the lines of the buildings erected by the state's earliest settlers. The picture shows the detail of the beautiful main entrance of Tustin Union High School, Tustin, with its arched doorways, carved pilasters and ornamental lamps.

Editorials

The Abuse of Equalization Funds

SOME states have already established funds, and other states are planning to do so, for the purpose of assisting impoverished districts to maintain schools of a standard up to that of the schools in prosperous communities. There has been throughout the country for the last two decades a persistent and determined drive to give pupils in isolated sections of every state as good an education as is offered to pupils in well settled and well-to-do sections. So far as is known, there have not been any authoritative voices raised against this policy. It is not going too far to say that, speaking generally, laymen as well as educators are in favor of taxing those who are well situated financially in order to help educate the children in destitute localities.

In certain states in which equalization funds are now being distributed to schools in need, there is some complaint arising from the way in which the funds are being awarded. A report has come from one state in which, apparently, state aid to impoverished districts is being taken advantage of by commercial land companies to lure settlers on to lands that can never yield a living to those who cultivate them. Actual cases are cited in which farmers have been induced to locate on waste lands on the promise that a good school would be maintained by the state for their children in the immediate locality of their homes. It is reported, also, that there is being maintained in this state a considerable number of one-room rural schools which are almost depopulated. These schools refuse to enter upon a consolidation program because each is receiving state aid, and there is no impetus for one such school to join with other schools in order to obtain economy and also efficiency. The investigator who reported this case declares that the administration of the equalization fund is retarding the movement toward consolidation, and so is actually putting a barrier in the way of educational progress.

Those who are responsible for the administration of equalization funds ought to have the right to withdraw state aid from any school that is being maintained partly or wholly for the benefit of companies that have lands to sell to settlers. Especially, the distribution of equalization funds ought not to result in the perpetuation of isolated one-room rural schools that should join with other

schools in a consolidation program. There is hardly any difference of opinion among those who are informed regarding the matter that a one-room rural school containing some ten or fifteen pupils is ill suited to train children for adjustment to present day American life. A state ought not to tax prosperous communities in order to maintain schools of this type. It can be counted on, though, that if the state will support these out-of-date schools, local communities will resist a movement to abandon them in favor of consolidated schools.

If state aid is to be used to keep poorly attended, one-room rural schools alive, such aid will hinder rather than help in the modernization of rural education.

Giving the Rural Handicapped Child His Chance in Life

DURING the last fifteen years our rural schools have made considerable progress in what might be called the fundamentals of education. Terms have been lengthened, teachers' qualifications have been advanced, teachers' salaries have been increased and buildings have been modernized.

In some other aspects of the program for rural schools, however, we cannot take the same satisfaction. Look, for example, at the problem of the handicapped child. Data regarding the prevalence of the more common physical defects of teeth, eyes, ears, throat, and so on, have been so widely distributed during recent years that there is no need to repeat them here. Among the more serious cases of physical handicaps may be mentioned those children with tuberculous tendencies and those with cardiac affections. Other types of handicapped children include the deaf and the near deaf, the blind and the near blind, those with various types of speech defects, those with less than normal ability and the crippled.

Data regarding the prevalence of these handicaps are woefully inadequate. A study made of typical counties of a Middlewestern state, largely rural, enabled the authorities to estimate that 5.6 per cent of all children of elementary school age have such deficiencies that some form of special instruction is necessary. Figures given out last year by the White House Conference indicate that there are more than 3,000,000 children in our elementary schools requiring special training. Among these are more than 14,000 blind and 50,000 partially blind; 100,000 crippled and 375,000 who are tuberculous.

One of the first steps, therefore, that need to be

taken is to get a reasonably accurate census of the children who are suffering from the various handicaps. These data are certain to impress us with the importance of making an attack upon the whole problem.

It is perhaps, not to be wondered at that this matter has so largely escaped attention in rural areas. In so many cases the smaller districts and communities have been so engrossed in providing for the fundamentals of education that they have not had the time to give consideration to such matters. Furthermore, no one small school is likely to show many pupils with these handicaps, and for this reason we have been encouraged to become complacent. When, however, we see data regarding the total number of such cases, our attention is likely to be challenged, for certainly there is no reason to suspect that the number of such cases is smaller in the rural areas than in the cities.

For many years the city schools have been attacking this whole problem. They have provided special classes and special schools for handicapped children. All of these institutions and organizations have developed special techniques that are beyond the knowledge or experience of the ordinary teacher.

How may we obtain such facilities for the children of the rural areas? The first difficulty is that the handicapped cases are spread over such a large area that it is not easy to get a sufficient number together at one point to make the instruction even reasonably economical. The second difficulty is that most of these small schools do not have funds that will enable them to provide the special facilities required.

Various means may be employed, a few of which are suggested as follows:

1. As consolidated schools are developed, certain facilities become possible. A class for the backward may be established; an adequate health program may be instituted; an opportunity class may be set up. For those with other less common types of deficiencies—the deaf, the near blind and those with cardiac or tuberculous weaknesses—not even a large consolidated school can ordinarily afford to provide the facilities required.

2. In many cases it should be possible for the rural areas near a city to contract with the city for the special care of these handicapped children.

3. If a city school system with a modern program is not available, it might be desirable to establish county or other special schools. A county might be able to set up one or more clinics or to establish a special class for those with visual defects. With our modern facilities for transportation, it is possible, in many sections of the country, for those children to be transported daily

or, in the more isolated areas, weekly from their homes to the county school.

4. If none of the foregoing methods is possible, itinerant specialists may visit the children in their homes, giving such information as may be feasible.

Clearly we must give serious consideration to this problem if we are to make effective a program of equalization of educational opportunities for children in the rural areas.—J. E. B.

Are Teachers Paid in Accordance With Their Ability?

IN universities, in the past, and to a considerable extent at present, the highest rewards have been attained by men and women who excel in research rather than in teaching. The great college teacher has as a rule been obscured by the great investigator. In some universities it has been said explicitly by those in the seats of the mighty that salary increase and promotion in rank depend primarily upon successful research rather than upon successful teaching. Consequently college instructors have endeavored to attain distinction in research and have paid little or no attention to improvement in teaching.

This is the chief reason why in every section of our country people are now howling about poor teaching in the higher institutions. Even college and university presidents are complaining because of the inefficient methods of instruction in their respective institutions. Legislatures are threatening to hold up appropriations in state universities unless better work is done in classrooms. Bills have been introduced in several legislatures designed to compel state universities to put their "best men" on instructional work and let the less able men go into research. Needless to say, legislative tampering with teaching can never remedy any evil. The situation will be improved in the higher institutions only when expert teaching receives the tangible rewards and also the distinction and applause that have heretofore been granted only to research.

In elementary and secondary schools salary schedules have generally favored high school as compared with elementary school teaching. This arrangement has served to produce unrest among teachers in the lower grades. They have taken note of the fact that their colleagues higher up enjoy greater prestige as well as a more generous income than they do themselves, and nothing on earth can prevent discontent in such a situation. Elementary school teachers, especially primary teachers, struggle to get into high school positions. They attend summer sessions of colleges and universities

and choose courses that they think will give them entrée to positions in secondary schools. This is all wrong as far as efficiency and good morale of a teaching staff are concerned.

Happily the movement to establish a single salary schedule is gaining momentum. In an increasing proportion of cities a teacher in the first grade is paid the same salary as a teacher in the high school if she has had similar training and experience and ranks as high in personal and professional characteristics and qualities. This is the only kind of a salary schedule that can promote efficiency, confidence and morale.

The Opportunity of the Depression

IN 1932 the public schools of the country are facing the most serious financial situation of the postwar era. No one who is acquainted with the facts can doubt that many communities are threatened with retrenchments in school financial support far beyond those that can be justified on the basis of either economy or efficiency. Children are in real danger of being denied school opportunities which should be the birthright of all.

What is the duty of school leaders in this situation? Their first duty is undoubtedly to defend their local school programs with all the skill and vigor that they can summon. Important as this is, however, it is not their only duty. The absorption of school executives in their individual local problems during the prosperous twenties partly accounts for the obstacles to adequate financial support that the schools are meeting in the lean thirties.

The financial stringency that threatens educational programs in many communities is the result of two causes—first, the reduction of the national income in two years from ninety billion dollars to sixty billion and, second, the failure in an emergency of an out-of-date system for raising tax revenue. If school leaders throughout the country had waged a united and vigorous, rather than a scattered and hesitating attack on the problem of reconstructing the fundamental bases of school support during the past decade, the present situation might not be easy, but it would certainly be far less difficult.

Such an attack upon the fiscal problem of the schools might not have prevented the first cause of difficulty—the drop in national income—even though it would have operated to some extent in that direction. If in 1929 a larger share of the nation's economic energy had been directed to the fashioning of modern school systems, adequate to meet the educational needs of a complex industrial

society, and less had been consumed in overbuilding, overequipping and overstaffing factories and other instruments of production, the supply of economic goods would not have so far outrun the demand, and the depth of the depression might have been less severe.

But how about the other factor in the situation—the obsolete machinery for taxation? The opportunity to recondition this machinery is still wide open. In fact, it is better than it was before October, 1929. The very severity of the economic convulsion is forcing many states to choose between two alternatives—the closing of the schools or the radical revision of the system for raising revenue for their support.

Faced with this choice it is not hard to predict what the American people will do. Their faith in the public school which is the finest expression of the American dream of equality of opportunity for all, will stand firm. In fact, there is already concrete evidence that now is a peculiarly favorable time for a radical revision of our system of school support. Within the past two years five states have passed entirely new personal income tax laws and eight have increased the rates of laws already in effect. In the same brief period four states have enacted measures taxing corporation income and seven others have increased their rates on this form of income. Additional states, such as New Jersey, appear to be on the verge of passing income tax legislation of the personal or corporation type. It is doubtful whether any other two years in the nation's history have witnessed such substantial progress by so many states toward modern systems of taxation.

School leaders should look upon 1933 as an opportunity, not a threat. If no agency exists for collecting the material upon which sound tax legislation may be based—such, for example, as the Mastick Commission which reported with good effect to the recent New York legislature—then in each state such a group should be created at once. It should be composed of tax experts, intelligent educators and public-spirited citizens. It should be strongly supported both morally and financially. It is the duty of educational statesmanship to see that no state legislature meets during the next year without a program as it affects tax legislation. This program should be vigorously supported by laymen and school people alike.

If we take time by the forelock, we shall be able to look back upon the early thirties as a period in which many states modernized their systems of taxation and provided education the support that this great social instrument deserves. This is the opportunity of the depression. Have we the statesmanship—the courage—to grasp it?—J. K. N.

Happy to Say—By WILLIAM McANDREW

THESE are the days when it is easy to be a Jeremiah. He wrote five books of lamentations—154 dirges in all.

YOU can, if you try, compose as many wails.

THE bankers have sold bonds they didn't investigate. The Congress has tariffed our international market to death. Surplus dollars are stored to pay dividends during slack times, leaving none to tide workers over the lean years. There is food enough for twice our population and millions are hungry. We have a public unable to think and solve problems. It elects its own kind to office and leadership. Those who are not robbing us in the government are too lazy and weak to stop those who are.

WITH these for a starter you could write several hundred more.

"THESE are the times that try men's souls," said Tom Paine in "The Crisis" in 1776, and immediately he set about stiffening men's souls to meet the trouble. He and the numerous planners of the republic said prosperity and happiness depend upon educating each generation in the management of our common affairs. They held that an institution supported by general taxation should teach government, politics and economics. Such training, they held, must be predominant. The side lines could be literature, mathematics, language, refreshment and ornament.

BUT we have made these secondary studies the main thing for youth who are old enough to begin to think about civic problems. Our teachers are not expert, as the public school pioneers said they must be, in political problems of cooperative government. They do not teach civic thinking and public economics. They avoid them.

ON THE schoolmaster the country must depend to ensure the next generation against a worse plight than ours.

THIS depression creates your opportunity.

THE sentiment and pull which prevented you from remaking your school and weeding out obstinate or lazy teachers are weak in this crisis. The influence which kept Latin, algebra, and third-year French in high school and left no time for the education of an enlightened opinion on public questions cannot persist in hard times. Now

is the most auspicious period you ever knew for scrapping half your nineteenth century "scholarship" and substituting present problems for discussion and thinking.

YOU don't know the answer to the crying civic questions of the day. Your teachers don't. Our generation doesn't even know what facts and proposed solutions are available. An enlightened public opinion is impossible to those who do not understand the language of government and political economics. Leadership toward success is not possible with the kind of followers the schools have produced, uninterested in common problems and unable to grasp what the leaders are talking about.

NOW is the time to put the schools on the basis the founders intended.

YOU are the men and the women to do it. Start something. Then better it.

DON'T be a Jeremiah.

CONSIDER rather the Maccabees, five lusty brothers with never a whiner or side-stepper among them, who drove the worship of classic idols out of Judea.

GIRD up thy loins.

THERE is no progress without change. There is no change in education without a changer.

WHAT are you waiting for?

CHIEF JUSTICE HUGHES fears the schools have not taught the people continuously to defend themselves against the inner foes of America.

PROFESSOR BRIGGS believes that if the school superintendent were cited to the grand jury to show the results of the heavy school tax, he would have hard scratching to uncover educational service worth its cost.

PROFESSOR KILPATRICK finds American school children vaccinated against thinking on economic and political problems.

SCHOOLMASTER WHARTON told me last June: "There hasn't been a single case of disobedience in my school for three months." Response: "Who's your undertaker?"

Schoolhouse Planning:

Pertinent Questions and Answers on the School Plant Program

By ARTHUR B. MOEHLMAN, Professor of School Administration and Supervision, School of Education, University of Michigan

DURING the course of this series of articles on the technique of the school plant program numerous inquiries have been received from school executives and school architects concerning specific details of planning and also raising questions regarding certain statements made.

These questions have remained unanswered purposely during the period of presentation for several good reasons. First, many of the inquiries covered the same point and could therefore be more effectively answered at the end of the series without useless duplication and, second, it was not considered desirable to break the sequence.

It is extremely difficult to present technical details in a series written for general appeal. I must refer all of those asking questions in regard to technical details to a three-volume series of books on the school plant¹.

Queries That Were Presented

The second group of inquiries raising specific questions with respect to statements made or point of view developed have been considered and generalized, and some of them will be answered here.

1. *Isn't this entire school plant program technique an academic question rather than one the practical administrator can use?*

This query raises the entire question of what is academic and what is practical. There are three general ways of disposing of a troublesome factor. If the annoyance lies in the field of politics, the term "bolshevist" is sufficient to damn it for all time; in the field of literature and art a new movement may be definitely hampered by the classification of "highbrow" or "esoteric" and in education, the parallel term is "academic."

Generally speaking, planning is admitted as being essential to any activity. The school plant program technique represents planning in as objective a manner as is possible under the present conditions of control over the field. Anything is

academic until it is put into practical use. The best answer to this question is that the fundamentals of the technique outlined during the past two years are intensely practical and have been used successfully in field practice by many superintendents and administrative specialists in an attempt to solve the difficult problems that confront them.

A Practical or Impractical Technique—Which?

Since large sums of money are annually required for physical plants, it is of the utmost importance that such buildings be located, planned and erected according to the best knowledge available. If the achievement of such a program requires a survey and statistical technique, there is no valid reason for supposing that anything which departs from the "finger-and-thumb" method of calculation is therefore impractical. If the query means that it takes a long time to find the final answer to the question that the "go-getter" executive thinks of today and wants answered tomorrow, and that this time factor renders the suggested procedure impractical, then the answer must be in the affirmative. If, on the other hand, the question is merely in regard to the usability of the procedure then the school plant technique I have presented is intensely practical.

2. *Why go to all the trouble of making an industrial survey which takes both time and money? If the educational policy calls for schools a mile apart, isn't it much simpler to draw circles on the map, avoiding major thoroughfares as much as possible?*

Careful study of land utilization shows that conditions prevailing today may be completely changed within a few years. It is hazardous to use even the best empiric knowledge of community conditions unless all possible trends have been carefully studied and accounted for. The city in the United States is one of the most dynamic units in the world. I have surveyed communities that within less than thirty years showed changes ranging from subdivision through all of the cycles from residences to boarding houses, to tenements and,

¹Moehlman, Arthur B., *The Public School Plant Program*. Spain, Moehlman and Frostie, *Public Elementary School Plant*. Pickell, Moehlman and Frostie, *Public Secondary School Plant*. Rand, McNally & Co.

finally, to either apartments or to industrial or commercial areas. Since school buildings may be reasonably expected to last fifty years, it would be a shortsighted policy to erect a plant planned on the assumption of present knowledge by the arm-chair method of drawing a few pretty circles on a map.

A Good and a Bad Example

Two illustrations taken from recent studies will suffice to meet the question. In City A fifteen years ago school buildings were planned on the basis of the best knowledge of future trends available, gained through a survey. At the time a number of persons "who had grown up with the town" felt that the locations were mistakenly chosen. A re-survey for appraisal purposes made last year indicated that the greatest error in any choice of a new location was only 5 per cent while the mode was within 1 per cent.

In City B eight years ago the superintendent drew some pretty circles on the map. The new school plant was erected. Then the major industry of the community expanded. A study of the trends of this institution would easily have indicated its possibilities. Today three of the six new elementary buildings are obsolete with respect to drawing power. It is already necessary to provide bus transportation for one of the units in order to keep it filled. The buildings are all fireproofed and of expensive construction. What will become of them during their next possible forty-two years of life? The unintelligent extravagance of this program is not yet obvious to the public. Within five more years it will be. This situation becomes all the more difficult to understand because a similar mistake made in the same community twenty-five years previously quickly rendered two buildings obsolete. Since they were sold at a reasonable price, the community did not realize what had happened. Even with the most exacting socio-economic survey, it is hazardous to choose a location for buildings; without it, the performance is folly.

3. *You have talked about the danger of the outside survey. Isn't the inside survey (when an out of the system specialist is employed) just as dangerous to the superintendent? Dare he admit to the board of education that he does not know the technique?*

The inside survey is not dangerous from the same standpoint as the outside survey earlier discussed. The specialist works under the direction of the superintendent as an executive adviser or research agent and not as an administrator or directly with the board of education. This functional concept of the consultant is necessary to secure the results I have advocated. If the super-

intendent does not acquire control over the technique and direct the program of survey development that is his own fault and not one involved in the technique. To me the best fruits of the survey are irretrievably lost if the superintendent and his assistants are not educated at the time the activity progresses. Granting their normal ability to learn, the outcome of the inside consultant type of survey should be not only the finished program but also the ability of the organization to carry on by itself from that point.

The second question raised is whether the superintendent dare admit to the board of education his lack of skill in a highly specialized field. I have seldom met with a board of education intelligently informed on educational matters whose members assumed their superintendent to be fully versed in every phase of an intricate activity. I have also never seen a board of education whose members did not think better of their executive for admitting that he needs help. Public schools are accustomed to turn to their state universities for specialized assistance in institutional fields and there is no weakness in so doing in administration. Even if this procedure were doubtful the records indicate that superintendents involved in poorly conceived and poorly planned programs seldom outlive the first phase of the program in that particular community. If my experience is not sufficient to meet the question, it resolves itself into a "Hobson's choice."

4. *What are the actual savings in a building designed solely by the architect and one designed by the educational specialist, cooperating with the architect?*

My records show two cases in which specific and adequate comparison is possible. The first is Building A, already designed by the architect when the board of education suddenly had misgivings about the price. Without reference to the existing plans, an educational specialist was asked to design the building in terms of curricular needs, using only the same physical envelope. The estimates of the first plans were made one year and the contract let for the redesigned building the second year on practically the same market, subject only to monthly or seasonal fluctuations. The actual money saving for a slightly larger capacity was 16 per cent in this instance.

When a Specialist Saved the School Money

Building B, also a secondary school, had reached the actual preliminary construction stages before the board of education decided to seek further advice. Construction was therefore stopped when the footings and basement walls were completed. The interior floor plan was restudied in terms of

curricular needs and redesigned to a larger capacity within the same shell. The savings in this case amounted to practically 20 per cent, estimated in terms of usable capacity. The difference between the two methods will vary directly with the skill and experience of the architect. In general, I believe that educational designing should show a net saving (instructional adequacy being equal in both cases) of approximately 15 per cent.

Designing the Plant

5. *Should educational designing take place before or after the architect has been given authority to proceed with the plans?*

On the whole, it is desirable to do the educational designing before the architect is employed or else to start it at the time he is employed. While there are several different points of view on this subject, I believe that the best results are obtained when the educational specialist and the architect work together cooperatively in an attempt to achieve the best for the children of the district. The two phases of planning are just as widely separated as is architectural from construction service. They are not in competition or in conflict. If the organization is not capable of educational designing it is well to secure this service from the state university or from specialists in similar institutions. I have yet to meet an able architect who is not glad to work whole-heartedly with the educational specialist. The architect is just as eager as the superintendent is to develop a building that will be both serviceable and efficient. He also realizes the difficulties involved in educational designing. Evidence of this fact is the increasing number of school architects who are adding educational specialists to their office staffs.

6. *In view of the uncertainty of the future in public education, how well shall we build?*

This is a difficult question. It is already partly answered for the city districts by building code enactments. If a building is expensive, the immediate public tendency is to blame the board of education. Careful analysis of state and local building code requirements in regard to safety and health measures indicates that certain qualities are legally in-built without choice. In general, the city district must build fireproofed structures and these are expensive. In villages and rural areas where, the climate being favorable, it is possible to erect one-story buildings, the value of expensive construction may be questioned. There is no reason to assume that simple steel beam and some type of cement block construction, such as is being constantly used in residential work, will not serve effectively in school construction. The quality of instruction is not dependent on the choice of building material.

The first factor determining "how well to build" is location, the second is climate, and the third is the state and local code requirements.

Educationally it might be desirable to build for a single generation, for twenty-five to thirty years. This is only an assumption, however, and has not been verified by research. Since most of the factors are beyond our control we shall probably continue to erect buildings planned to last for fifty or sixty years, hoping that all will be well in the future. Under these circumstances I can only stress the fact that it is highly important to build flexibility and expansibility into the basic plan.

7. *Is good design in a school building expensive?*

If by design is meant the totality of effect obtained through proper proportion, balance and the massing of the structure from a functional standpoint, the answer is decidedly in the negative. If, however, design is construed as the direct ornamentation and elaboration that is inherently non-functional and therefore questionable architecturally, the difference in cost will vary from 1 to 10 per cent of the total cost, depending on the type of material and its method of use. I have seen two buildings in the classic style, one of which cost approximately thirty thousand dollars more than the other because the architect used solid stone for the front portico pillars rather than stone set up as unit blocks, which is the usual method. Since there are several points of view respecting architectural design, the reasonable answer to the question would be that good design in a school building will cost from nothing to approximately 10 per cent of the total cost of a structure.

A Dubious Economy

8. *We are planning a building in our community. A resident contractor-architect has informed the board of education that he will draw the plans for nothing if the board will permit him to erect the building. There would also be no charge for supervision. Thus the saving to the district would be 6 per cent of the total cost which will be approximately \$200,000. The board is much impressed. Is this plan wise?*

Several incidents of this character have come to my attention within the past three years. The \$12,000 savings in architect's fees in this case are more hypothetical than real. The architect in return for his commission acts as the agent of the board in preparing the technical plans, selecting the material and superintending the construction. The monies paid to him are not an extravagance but a sound investment. The board is assured of what it is getting in its building only through his services. The contractor on the job must live up to the specifications the board has adopted. By the

method suggested the architect's work, superintendence and construction are combined under one head. What is the protection?

Granting the honesty of the contractor-architect, it is questionable whether the district will not pay dearly for the dubious "bargain" of getting plans for nothing. The American habit of believing in "bargains" and "something free," placing childlike faith in anyone who will promise something free and looking with suspicion on the able professional who merely promises to deliver services for a reasonable reward is a dangerous practice to follow in public building. I believe that this board of education can make no more economical investment than to hire the best school architect it can obtain even if it is obliged to pay a 7 per cent commission.

9. *We are almost ready to build our "one school in a century." A local contractor has told the board of education that he can save several thousand dollars if given the job without the process of bidding, since he will be saved the job of making expensive materials estimates. Is his contention sound?*

This is reminiscent of the preceding query. Unless a contractor actually studies the plans and makes an estimate of materials, how can he tell what the job will cost? There are many hundreds of types of materials used in a school building. Each of these varies in amount and in cost. Unless there is some unknown magic in building, it is difficult to see how this contractor can determine a saving to the school. In general, all public business should be publicly conducted and all activities should be subject to competitive bids. There is no safer way in public business to secure the best price, although not always the best contractor. The methods of bidding are thoroughly discussed in "The Public School Plant Program." I suggest that they be presented to this board of education with proper warnings of the difficulties involved in the procedure suggested by the local contractor.

Amazing Growth of High Schools Shown in Survey

"The present proportion of enrollment in American high schools has never been equaled at any other period or in any other country, and the pouring in may be assumed to indicate that rapidly increasing proportions of children from what are termed the lower economic levels are being given the opportunities of education at the secondary level."

Dr. Leonard V. Koos, University of Chicago, noted authority on high school education, makes this statement in connection with the first formal

summary of "findings" of the National Survey of Secondary Education provided for by congress and lasting three years, which he directed. The study is based on returns from more than 200,000 inquiry forms answered by teachers, pupils, parents and employers, and from visits to more than 550 different high schools in practically every state.

Enrollment increases have been from 4 per cent of high school age boys and girls in 1890 to approximately 50 per cent today.

Among other significant findings of the survey are: an increasing number of trade schools; fewer technical and commercial high schools; development of continuation, evening and summer schools; use of correspondence courses; flexibility in requirements for admission to colleges and universities, and increasing opportunity for Negroes.

Information from 400 schools and findings of a specialist who traveled more than 13,000 miles to study at first hand, reveals that "the high school library will soon become one of the central features of the modern secondary school."

Can Enrollment Be Predicted by Population Trends?

Predicting population and school enrollment in the school survey is the subject of an extensive study made by Leo M. Chamberlain and A. B. Crawford, University of Kentucky.

The study analyzes the procedures commonly followed by school authorities and others in their studies of population and of the general literature dealing with the subject. The methods used in making the survey, it is pointed out, usually fall in one of these four groups: (1) the method of personal judgment; (2) the analogy method; (3) the multiple factor method; (4) mathematical and statistical methods.

"The entire procedure of attacking the problem of estimating future school enrollments appears questionable," the study concludes. "From this investigation it appears that simple and direct means for predicting school enrollments should, in the future, be substituted for time consuming procedures of a technical nature until the superiority of such procedures can be definitely demonstrated. Furthermore, it seems probable that a direct analysis of school facts, with only incidental attention to total population trends, promises the best basis for school predictions. Finally, the difficulty of accurate prediction under any circumstance must be recognized, and original estimates must be promptly and continuously altered in terms of newly discovered facts."

News of the Month

School Executives Meet at U. of C Conference

Public school administrative problems were discussed by school administrators of the country at a week's conference which opened at the University of Chicago on July 18.

Dr. Charles H. Judd, dean of the school of education at the university, and Prof. Leonard V. Koos of the same school spoke at the opening session on the subject of "Research in Public School Administration."

The afternoon sessions were devoted to round table discussion of the subjects of formal reports at morning meetings.

New Census Reveals Growth in School Attendance

The director of the census has announced the fifteenth census returns relative to school attendance for the population of the United States distributed by single years of age from five to twenty.

The statistics of school attendance are based upon answers to a question on the population schedule as to whether the person enumerated had attended school or college any time between September 1, 1929, and the census date, April 1, 1930. If the person enumerated had attended any kind of school, college or other educational institution for any length of time within the period in question an affirmative answer was to be made. On this basis the returns showed that of the 38,387,032 persons from five to twenty years of age in the population of the United States on April 1, 1930, 26,849,639, or 69.9 per cent, were attending school, as compared with 64.3 per cent in 1920. The percentage returned as attending school was greater for each year of age in 1930 than in 1920, and increases in attendance were noticeably high for the ages from fifteen to twenty.

The statistics given below show the school attendance for the United States by single years of age, for each sex, and by color and nativity, for 1930 and 1920.

For most of the younger ages the percentage attending school is higher for the native white of

foreign or mixed parentage and the foreign born white than for the native white of native parentage, while for the older ages, sixteen and over, the percentage attending school is higher for the native white of native parentage. For children five years of age the percentage attending school was 18.7 for native white of native parentage, 29.6 for native white of foreign or mixed parentage, 30.9 for foreign born white, and 12.7 for Negroes. For sixteen years of age the percentage attending school was 69.4 for native white of native parentage, 64.7 for native white of foreign or mixed parentage, 66.2 for foreign born white, and 55.3 for Negroes, the figures show.

In the total population, for each year of age up to thirteen, and for ages sixteen and seventeen, attendance rates were higher for females than for males; at age fourteen the rates were practically the same for both sexes; and at ages fifteen, eighteen, nineteen and twenty, attendance rates were higher for males than for females.

Chicago Board of Health Examines 1,690,791 School Children

During the past fifteen years, 1,690,791 school children in Chicago have been given physical examinations by the board of health; 3,511,124 physical defects have been found, and 1,012,129 corrections of defects have been obtained, according to Dr. Herman N. Bundesen, president of the board, in a letter to the *Journal of the American Medical Association*.

"Chicago school children have been given physical examinations by this department since 1908," Doctor Bundesen states. "In 1916 the Municipal Tuberculosis Sanitarium assigned to the board of health for this purpose fifty physicians. In 1930, the services of twenty-five of these physicians were discontinued due to a curtailment in the budget of the sanitarium.

"To control contagious disease, 120 school health officers and field health officers are employed. During 1930, the remaining twenty-five Municipal Tuberculosis Sanitarium physicians, with some additional help given by the school health officers, examined 139,125 children."



Above: This library floor is an aid to concentration . . . it is resilient Sealex Linoleum, quiet when walked on.

At right: The Kennett Consolidated School is one of many new schools in which Sealex Floors have been installed.



One of America's largest consolidated schools chooses Sealex

The Kennett Consolidated School, Kennett Square, Pa., has been called "a monument to practical philanthropy." The generosity of a public spirited citizen made possible one of the finest and best-equipped schools of its type in the United States.

The heavy corridor traffic in this wide spreading building travels on Sealex Linoleum Floors—the finest resilient floors ever developed for heavy duty. In hundreds of schools, Sealex Floors have proved their ability to give long service under the most difficult conditions.

Longevity is only one among many Sealex advantages. These floors are resilient. They muffle the noise of footsteps. They make the day's work easier for teachers who are on their feet most of the day.

These floors are healthful. There are no unsightly, dirt-collecting cracks—no troublesome splinters. Sealex Floors are spot-proof, stain-proof, easy to clean.

These floors are economical. Recent reductions bring the prices down to the lowest levels in many years.

Sealex materials, when installed by authorized contractors of Bonded Floors, are backed by Guaranty Bonds. Our School Floors Department will gladly supply further information.

CONGOLEUM-NAIRN INC., KEARNY, N. J.



News of the Month (Cont'd)

A Buying Guide for Elementary School Libraries Is Compiled

"A Buying Guide for Elementary School Libraries" is the title of a bulletin published recently by the University of Michigan, Ann Arbor. The guide is based on the titles selected for the library of the University of Michigan Elementary School.

There is listed a representative collection in the field of literature, beginning with picture books and nursery rhymes for very young children and continuing through the reading interests of boys and girls up to junior high school age.

In every subject group there is a sufficient range of choice for the selection of a working minimum for any elementary school library.

In a foreword, J. B. Edmonson, professor of education, says: "In many of our newer schools the educational program is built around the library, which provides the necessary laboratory for supplementing classroom instruction. Here the library reflects and elaborates the course of study, it breaks down the more or less formal barriers that textbooks inevitably raise between the world of knowledge and the pupil, and it helps the pupil to discover and follow his own taste in books and to develop reading habits that should form one of his most valuable assets throughout life."

Will Supervise Pupils' Health in Springfield, Ill.

With a view of instigating better health supervision in its schools, the city of Springfield, Ill., has established the office of director of health and hygiene in its school system. Dr. Gottfried Koehler, for twenty years assistant commissioner of health, Chicago, has been appointed director of the new department.

Modernistic Architecture Chosen for Kentucky County School

A modern high school for Fayette County, Kentucky, is now in process of construction and will be ready to receive pupils by the opening of school in the fall.

The school, which will cost \$78,000, is the first

fireproof building in the Fayette County school system. It is modernistic in design, with an auditorium and gymnasium on either side of the front entrance. Modernistic architecture was chosen because it eliminates exterior upkeep. The building will extend two full stories in height, while the central feature will embody a third-floor cafeteria. The rear wing will consist of eight classrooms, an agriculture laboratory, a general science laboratory, a home economics laboratory, a shop and a study hall, in addition to the principal's office, the medical clinic and the janitor's and storage room.

The basement will contain shower rooms for both boys and girls, storage rooms, a county carpenter's shop and the heating plant.

All ornamental work on the exterior of the building is to be of Bedford stone.

New Jersey Schools Save Through Insurance Adjustments

Adjustments of the insurance carried on state school property, following a survey ordered by the state board of education of New Jersey, have resulted in a saving of more than \$6,000 on premiums over a period of three years, according to a report by W. M. Dickinson, who is making the survey. It is expected that the figure will be increased, since the investigation is not yet completed, it was stated. In a letter to Governor Moore, Mr. Dickinson stated that he is opposed to a state fire insurance fund.

The savings to date represent nearly 15 per cent of the amount heretofore paid in premiums, the former total for a three-year period being approximately \$45,000. In addition, the state is better protected in case of fire, it is claimed, through an increase of insurance on some of the buildings not covered in the past by policies of sufficient amount. In other instances, policies said to be of excessive amount have been reduced.

Another result of the survey, it is stated, has been the elimination of numerous fire hazards by the correction of conditions in and about the buildings which constituted a menace in the event of fire. In turn, these changes have resulted in lower premium rates in many cases.

Demonstration of the economies possible may lead, it is thought, to a survey being made of the insurance carried by other departments.

Rockefeller Center — Builders and Managers: Todd, Robertson, Todd Engineering Corporation and Todd & Brown, Inc. Architects: Reinhard & Hofmeister; Corbett, Harrison & MacMurray; Hood & Foulhoux. Consulting Engineer: Clyde R. Place. General Contractors: Hegeman, Harris Co., Inc.; John Lowry, Inc.; Barr, Iron & Lane, Inc. Heating Contractor: Baker Smith & Co., Inc.

in
*Rockefeller
Center...*

(RADIO CITY)



MINNEAPOLIS-HONEYWELL PROPORTIONING MOTORS AND THERMOSTATS ARE EMBODIED IN THE DUNHAM AVERAGE TEMPERATURE CONTROL SYSTEM

Zone Control—Twelve zones determined by exposure, stack effect and type and hours of occupancy enable the Dunham Average Temperature Control System with Minneapolis-Honeywell equipment to deliver heat with utmost simplicity and precisely as the various zones comprising this 2,500,000 square feet of space demand.

ROCKEFELLER CENTER, or Radio City, as it is sometimes called, represents the very finest and newest architectural, engineering and mechanical developments known to science. . . . The Central Tower of this \$250,000,000 building project now rising in the very heart of Manhattan, is destined to become the heart of "world's greatest office, shop and amusement center." . . . The C. A. Dunham Company, seeking only the best equipment for use in its Average Temperature Control System, a component part of Dunham Differential Heating, chose Minneapolis-Honeywell Proportioning Equipment for this 70-story structure. . . . Whatever the requirement for temperature control may be, there is a Minneapolis-Honeywell device backed by 47 years of engineered heat control experience. Minneapolis-Honeywell Regulator Company, Executive Offices: 2820 Fourth Avenue South, Minneapolis, Minnesota. Factories: Minneapolis, Minnesota, and Elkhart and Wabash, Indiana

MINNEAPOLIS - HONEYWELL *Control Systems*

Branch and Distributing Offices: NEW YORK • BOSTON • HARTFORD • NEW HAVEN • PROVIDENCE • PHILADELPHIA • BUFFALO • SYRACUSE
ROCHESTER • PITTSBURGH • BALTIMORE • WASHINGTON • CLEVELAND • DETROIT • CHICAGO • MILWAUKEE • DULUTH • INDIANAPOLIS
CINCINNATI • ST. LOUIS • KANSAS CITY • DENVER • SALT LAKE CITY • SAN FRANCISCO • LOS ANGELES • PORTLAND • SEATTLE. *Canada:*
MINNEAPOLIS-HONEYWELL REGULATOR CO., LIMITED, TORONTO AND MONTREAL. *Export:* NEW YORK CITY. *Cable Address:* "LABORAMUS"

News of the Month (Cont'd)

Woman Physician to Make Child Hygiene Survey in States

A national child health campaign has been launched with the appointment of Dr. Estella Ford Warner, a national authority on the subject, as a surgeon in the Public Health Service, it was announced recently at the Treasury Department.

Spending a month or more in each state, Doctor Warner will survey child hygiene practices. She will make recommendations to state, civic and private organizations and transmit from one state to another the more noteworthy practices and policies, according to oral explanation.

Doctor Warner's survey will include all aspects of the child hygiene problem. The Public Health Service will publish a comprehensive review when Doctor Warner completes her tour, and this publication will be the basis for standardized and coordinated child hygiene endeavor throughout the country.

President Hoover has always displayed a lively interest in child hygiene study, pointing out that normal children seldom received attention commensurate with that given their subnormal and abnormal fellows. The recent White House Conference on Child Welfare and Child Health focused attention on the problem. The Public Health Service has dealt with the problem since 1912 but never on the broad lines now contemplated.

Doctor Warner is the first woman to be appointed a surgeon in the health service.

Secondary Education Survey Soon to Be Published

Publication of the National Survey of Secondary Education is expected to begin soon, Carl A. Jessen, specialist in secondary education, United States Office of Education, has announced.

The study will be published topically in special monographs rather than in volume form.

The first of more than twenty-four projects of inquiry is ready for publication. This is the project on "Science" in secondary schools, and it falls under the studies of curriculum. Wilbur L. Beauchamp, professor at the University of Chicago, has been in charge of this investigation.

It is expected that twenty-five or thirty monographs will be published. A general summary of

the whole scope of the inquiry, however, will be written in a brief volume.

Among the special topics investigated have been the organization of secondary schools, administration, special problems in reorganization, characteristics of the small high school, guidance, curriculum and extracurricular activities.

School Physicians Favor Mandatory Medical Inspection of Pupils

Medical inspection of school children, now provided for in thirty-seven states, should be made mandatory, in the opinion of school physicians in twenty-five states, it is stated in the report of the White House Conference on Child Health and Protection, recently made public.

Legislation touching the question of health examinations, the report points out, presents a variety of provisions, many of which "could be improved."

Two states require the examination of the teacher for communicable disease, and three states require the dental examination of pupils.

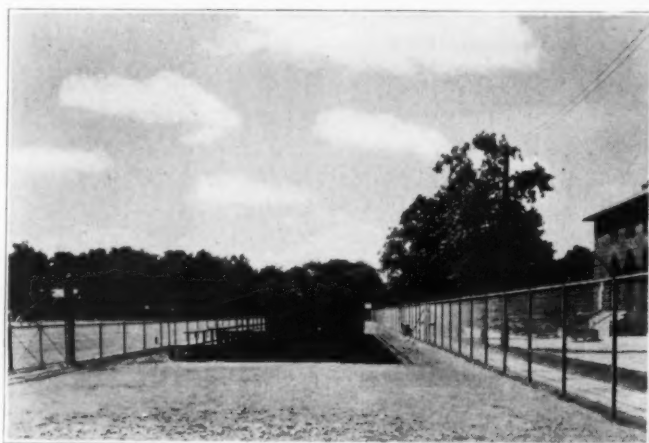
From the part of the report treating of laws concerning health examinations, the following additional information was supplied:

Forty-eight experienced school physicians in twenty-five states are fairly agreed that the law should be mandatory; it should not be too specific in its requirements; the state department of education should be made responsible for carrying out the provisions of the law.

Other recommendations of these physicians are: There should be a director of medical inspection; the local board of education should be made responsible for local administration of the law; the extent of the examination should be specified, with nothing to limit its thoroughness; the person in charge of the examinations should be specified, and the training of all teachers for the detection of signs of communicable disease and of gross physical defects should be a requirement of the law.

Obtaining the consent of the parents for examination, the doctors believe, should not be mentioned in the law. Permission for setting up dental and medical clinics should be granted by the law if it seems needful to have them. Finally, it is suggested that provision for mental examinations of school children should be included.

Make Money On Football This Fall



We Can Fence Your Athletic Field in Time for the First Game

Why *lose* money on school athletics when profit is usually a matter of making spectators pay!

There are two reasons why Schools with Athletic Fields fenced by Cyclone operate profitably. First, all who enter *pay* — the most expert gate-crasher is turned back by this barbed-wire topped barrier of steel. Second, increased attendance. For — it's just human nature to put a higher value on any spectacle where attendance is rigidly guarded.

Moreover it's easier to control crowds behind Cyclone Fence. Practice sessions can be secret, no "hangers on" to bother the players. Gym classes can be held out-of-doors.

There are so many advantages reported to us by schools that we would like to present the whole story to you. We are also prepared to submit complete information on fence for schoolyards and playgrounds.

Cyclone Chain Link Fence is made of copper-steel, heavily galvanized, to give you greater service at no greater cost. Erection can be handled either by you or by our factory-trained men. Write today.



Cyclone is not a "type" of fence but fence made exclusively by Cyclone Fence Company and identified by this trademark.

Cyclone Fence

CYCLONE FENCE COMPANY

GENERAL OFFICES: WAUKEGAN, ILLINOIS

Branch Offices in All Principal Cities

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division: STANDARD FENCE COMPANY, Oakland, Calif.

L. SONNEBORN SONS, Inc.
GUARANTEED PRODUCTS

Do the CHILDREN in your SCHOOL wear FELT SLIPPERS?

IT'S amazing how much damage young people can do with their feet. No one knows this better than school boards.

You can't stop the abuse, but you can use a protective measure that never fails to get results. You can treat your wood floors with LIGNOPHOL and double their resistance to wear and tear. It can be done after hours. No need to wait for vacations.

Lignophol enters deep into the wood fibres and acts as a preservative. That's the point to remember. That's why you should not confuse it with "finishes" which merely treat the surface.

At very little cost—only one to two cents a square foot—you can thus fortify your floors to the utmost. Lignophol is supplied in all standard colors. It is easily applied with a long-handled, three-knot brush. A trained Sonneborn service organization will apply it, if desired, at practically no increased cost, if the location is accessible.

Sonneborn Consulting Service, backed by 26 years of experience, will gladly aid you in any problem of preserving floors, walls or foundations. Do not hesitate to call upon us.

Note these famous Sonneborn savers of school buildings and maintenance expense. The coupon below will bring you detailed information

LAPIDOLITH

—A chemical liquid hardener for preserving and dustproofing concrete floors.

LIGNOPHOL

—For finishing, preserving and wearproofing wood floors.

HYDROCID COLORLESS

—For waterproofing exterior of exposed walls.

CEMENT FILLER AND DUST PROOFER

—A decorative and dustproofing treatment.

CEMCOAT EXTERIOR AND INTERIOR PAINTS

—Tough, durable paints that produce an attractive finish. Various colors.

MAG-I-SAN CLEANING POWDER

—For economy and thoroughness in cleaning floors, walls, general utility.

AMALIE WAX

(Liquid and Paste)
—Durable and dependable wax for every purpose. A Sonneborn guaranteed quality product.

L. SONNEBORN SONS, Inc.
88 LEXINGTON AVENUE • NEW YORK

Mail
Coupon for
Information



L. SONNEBORN SONS, INC. N.S.—8
88 Lexington Avenue, New York

Please send me, without obligation, demonstration samples and literature on: Lapidolith; Lignophol; Cement Filler and Dustproofer; Cemcoat Exterior and Interior Paints; Hydrocide Colorless; Mag-I-San; Amalie Wax;
(Check products that interest you.)

Name _____
Address _____
Company _____
Position _____

News of the Month (Cont'd)

Merger of Two Education Units Is Sought in Kentucky

In the interest of economy and efficiency the Bureau of Vocational Rehabilitation and the Bureau of Vocational Education of the Kentucky State Department of Education "should be combined and organized as one department," Nat B. Sewell, state inspector and examiner, said in a recent report to Governor Ruby Laffoon.

"At this time, with the need of rigid economy in state expenditures so apparent and with hundreds of incapacitated men and women in line for training that would make them self-supporting," said Mr. Sewell, "I feel that a considerable reduction in expenses can be made in the Bureau of Vocational Rehabilitation and, with this reduction, the bureau will be able to reach many more pupils and to render much more extensive training with the funds now available for such work."

School Retrenchment Measures to Be Studied in Survey

A study of retrenchment measures being employed without an educational loss, an analysis which will help states eliminate waste in school administration and the gathering of facts to aid legislatures in providing adequate financial aid to the schools are the major lines of investigation endorsed by the board of consultants of the National Survey on School Finance for immediate inquiry. These proposals are:

The location of retrenchment measures now being used which promise saving without educational loss. Near the end of this school term the country will be combed for retrenchment measures which, in the judgment of those using them, have resulted in little or no loss. As many as possible of these measures will be subjected to rigorous checks. The findings will provide guidance for school boards, as the results become available next year.

The collection and analysis of facts which will help many states in attempts now being made to eliminate waste and improve educational opportunities in rural schools. The depression has spurred on the attempts to bring about changes which should have been made long since.

The development of facts essential to the various state legislatures in providing adequate state aid for public schools, thereby relieving overburdened taxpayers with a minimum of loss to the schools.

During the last decade many states have taken significant steps in this direction. At the present time the need for relief which in good times was felt acutely only by the less favored sections of the states and by the most overburdened taxpayers in the able communities now is also urgently needed by all but the most favored communities, and many attempts will be made in the next legislature to bring relief.

Even in the legislative year 1931 this question was up for consideration more than any other educational question. This is a field demanding technical information and service, if the results gained are to be those looked for.

The gathering of facts on the nature of the returns received from various different amounts spent on education, thereby providing assistance to school authorities faced with the necessity of reducing budgets in this emergency. The questions raised here will be of the following type: (a) What does the community spending \$70 per pupil obtain that is denied the community spending but \$50 per pupil? (b) What disadvantages are suffered by the community spending \$50 per pupil that are not suffered by those spending \$70 per pupil?

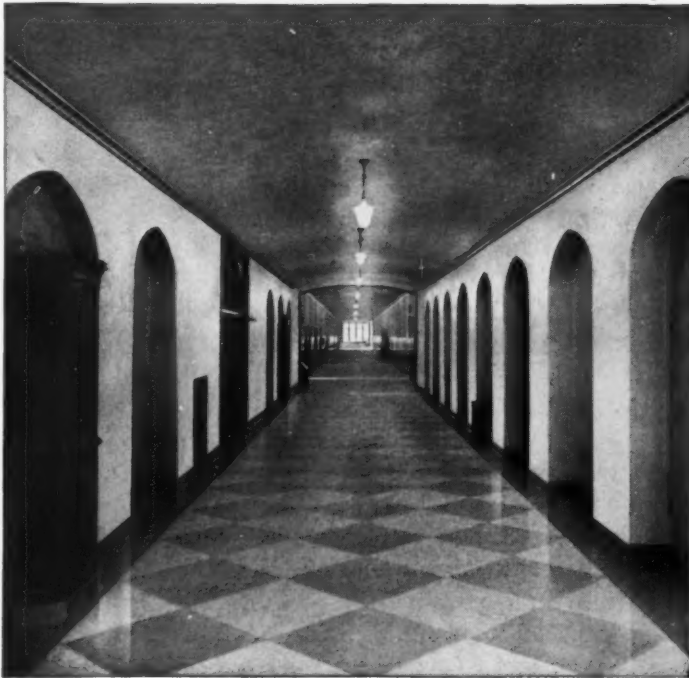
Deposit of School Funds Is Subject of Ruling in Pennsylvania

The deposit of funds of a school board in the trust department of a trust company which has been unable to obtain the required depository bond would be illegal in Pennsylvania, Harris C. Arnold, deputy attorney general, has just held in an opinion addressed to W. M. Denison, deputy state superintendent of public instruction.

Under an act of 1929, it was explained in the opinion, trust companies are permitted to use in their business trust funds awaiting investment or distribution, provided certain securities are set aside to protect the funds so employed. This act, however, applies only to the administration of funds held by trust companies in fiduciary capacities and has nothing to do with deposits, it was held.

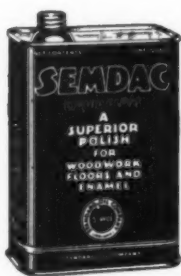
If a school board should enter into an agreement whereby a trust company would be created a trustee for the administration of school funds, so as to bring the money within the terms of the 1929 act, Mr. Arnold ruled, the school board would be surrendering control of its funds, which it could not lawfully do.

School floors need Semdac Liquid Gloss



In the development of Semdac Liquid Gloss the research department of Standard Oil Company (Indiana) has incorporated every desirable feature for the treatment of school floors.

On plain wood floors, Semdac acts as an efficient preservative, keeping down dust and retarding cracking or warping. It maintains the natural color of the wood, does not leave an oily or greasy residue, and it is safe from fire hazard. Less scrubbing is necessary. The floor impregnated with Semdac absorbs little moisture. Snow, mud, dirt tracked in by the pupils do not penetrate the wood but remain on the surface where removal is easy. This brings economy in school cleaning costs.



SEMDAC FURNITURE DRESSING



Semdac Furniture Dressing is an ideal polish for the finer furniture. It leaves a brilliant durable lustre. Merely applying it removes the dirt. Gentle rubbing with one or more clean, dry cloths brings out the rich, high lustre.

Semdac Liquid Gloss finds universal use in the school. Its great cleansing action, its high luster, and its ease of application make it exactly suited to all school needs. Semdac can be economically purchased in barrels, half barrels, five gallon, half gallon, quarter and pint cans.

STANDARD OIL COMPANY

(Indiana)

910 S. Michigan Avenue Chicago, Ill.

SEMDAC

LIQUID GLOSS ... FURNITURE DRESSING

STANDARD OIL COMPANY (Indiana)
910 South Michigan Avenue, Chicago

I am interested in receiving
☐ Copy of Semdac Liquid Gloss Booklet.
☐ Prices of Semdac Liquid Gloss.

Name.....Address.....

City.....State.....

In the Educational Field

DR. EDMUND L. TINK has been elected superintendent of schools, Kearny, N. J., succeeding DR. HERMAN DRESSEL, who has retired after serving for twenty-five years in that office. During the past year, DOCTOR TINK has been associated with the General Education Board of the Rockefeller Foundation, New York City, in charge of an investigation of various public school problems.

WILLIAM R. SPRIEGEL has been appointed superintendent of schools, Madison, Mich., to succeed MRS. ALINE G. MOEGLE.

THOMAS ARKLE CLARK, for many years dean of men at the University of Illinois, Champaign, Ill., died on July 18 at Urbana, Ill., of an ailment diagnosed as cancer. He had been ill since his retirement from the faculty of the University in August, 1931. Dean Clark was the originator among universities of the office from which he retired and was known as "America's pioneer dean of men." He was seventy years of age at the time of his death. He was appointed dean of men in 1909.

DONALD WELLS GOODRICH, recently head of the lower school, Tamalpais School, San Rafael, Calif., has been appointed the new head of the Calvert School, Baltimore, to succeed the late VIRGIL M. HILLYER.

RALPH I. UNDERHILL, superintendent of schools in Scarsdale, N. Y., for the past eight years, died in New York City, on July 18.

DR. JOSEPH S. TAYLOR, retired district superintendent of schools, New York City, died recently at Greensboro, Vt. DOCTOR TAYLOR, who was seventy-five years old, was the father of Deems Taylor, noted composer and music critic.

FERDINAND E. SMITH has retired as superintendent of schools, Cortland, N. Y., in which capacity he has served for the past thirty-six years. L. T. WILCOX, for the past seven years principal of the Cortland Junior-Senior High School, has been elected superintendent of schools in Cortland.

WILLIAM ALEXANDER SMITH, superintendent of schools, Hackensack, N. J., since 1923, died at Ossining, N. Y., on July 16. He had formerly served as superintendent of schools in Ansonia, Conn., Poughkeepsie, N. Y., and Derby, Conn.

RAPHAEL JOHNSON SHORTLIDGE has been appointed head master, Tome School, Port Deposit, Md., succeeding DR. MURRAY PEABODY BRUSH who becomes head of the California Preparatory School, Covina, Calif. MR. SHORTLIDGE has been head master, Storm King School, Cornwall-on-the-Hudson, N. Y., for the last five years.

WESLEY E. NIMS has been elected superintendent of schools for the towns of Townsend, Lunenburg and Ashby, Mass., succeeding WILLIAM H. MILLINGTON. MR. NIMS, who assumed his new post on September 1, served as superintendent of schools in Orange, Mass., from 1912 until 1917.

C. H. OMO has been elected superintendent of schools, Uniontown, Pa. MR. OMO was formerly head of the school system in Vandergrift, Pa.

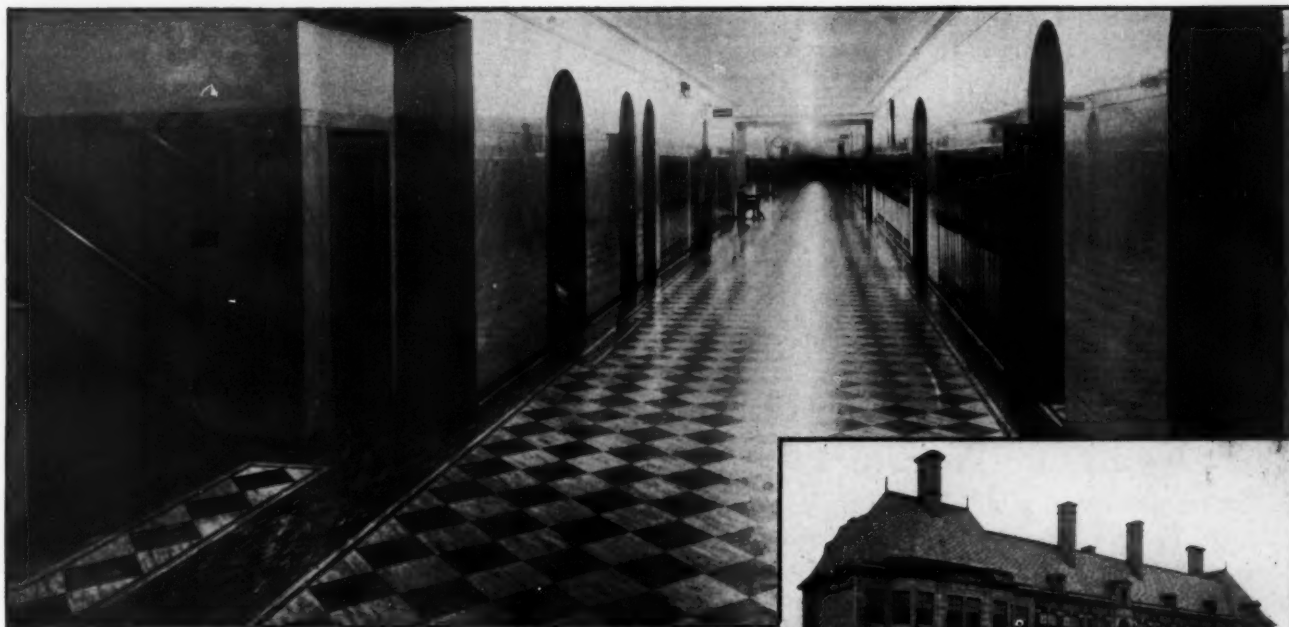
E. E. HOLT, superintendent of schools, Georgetown, Ohio, has resigned to accept a similar position in Hillsboro, Ky., where he succeeds Z. M. WALTERS, resigned. MR. HOLT was head of the schools in Georgetown for seven years. CHESTER JOHNSON has been selected to succeed MR. HOLT as head of the Georgetown schools.

THOMAS J. QUIRK has been elected to succeed MICHAEL D. FOX as superintendent of the Washington school district, Hartford, Conn. MR. QUIRK has been principal of the Milford High School, Milford, Mass., since 1920, and has been associated with educational work for the past seventeen years. MR. FOX had served as head of the Washington school district for the past fifteen years.

Directory of Nursery Schools Is Now Available

A directory of nursery schools in the United States has recently been issued by the Office of Education. The names and locations of the schools are given, together with the age range of the pupils in years and months, the name and title of the person immediately responsible for the nursery school and the hours the school is in session.

Two hundred and three nursery schools are listed, with New York State heading the list with thirty-five schools. California is second with twenty-one and Illinois third with nineteen.



Dri-Brite Liquid Wax—after careful experiments with many other floor treatments—has been standardized for maintaining the linoleum and terrazzo floors of the Grosse Pointe, Mich., public school buildings

Maintains Floors With 50% Less Labor ... Life of Wax Finish Doubled on Linoleum and Terrazzo

Facts as found by a Gould Reports Investigator at Grosse Pointe Public Schools, Grosse Pointe, Mich.:

AFTER thorough comparative tests, the schools of Grosse Pointe, Michigan, which are nationally known for their high educational standards and excellent equipment, standardized on Dri-Brite Liquid Wax for maintaining linoleum and terrazzo floors in all 6 elementary schools and the high school. They found that Dri-Brite lasts twice as long as other waxes, requires 50% less labor per treatment than waxes that must be polished when applied, never gets slippery, and has no offensive odor.

In the Grosse Pointe High School, which accommodates 1,400 pupils, the corridors contain 38,000 sq. ft. of inlaid linoleum. Dri-Brite is applied 6 times a year to the lower corridor, 3 times to the upper; it quickly gives a hard bright surface without polishing. Twice a year the floors are washed before treating; and

weekly (44 weeks a year) they are cleaned and polished with a rotary brush machine. The total cost for material and maintenance labor is only 1 3/5 cents per sq. ft. per year for the lower corridor and 1 cent for the upper corridor. Push-brooming is done as part of the other janitor work, at a negligible cost.

The battleship linoleum in classrooms, library, etc., requires only one or two applications of Dri-Brite per year, and the maintenance cost is very low.

In the Père Gabriel Richard elementary school, grit from the play yard is tracked onto the linoleum and terrazzo floors by 500 children. Nevertheless, these floors require only 6 applications of Dri-Brite a year (1 gal. covers a corridor 2,640 sq. ft. in area), and weekly cleaning (44 weeks a year), costing just over 1 4/5 cents per sq. ft. per year for material and labor. Dri-Brite prevents the grit from reaching the linoleum, and cleans terrazzo stained by other treatments.

DRI-BRITE LIQUID WAX

A secret formula, developed and tested over a 6-year period. Recommended by leading flooring manufacturers for linoleum, asphalt tile, hardwood, rubber tile, terrazzo and marble, painted and varnished floors.

Made Only by **MIRACUL WAX CO.**
1322 Dolman St., St. Louis, Mo.
U. S. A.



SEND COUPON FOR FREE TRIAL

MIRACUL WAX CO., 1322 Dolman St.,
St. Louis, Mo., U. S. A.

NS 8-32

Please send me, without obligation, a trial can of Dri-Brite Liquid Wax with full instructions for use.

School

Address

Town

Individual's Name

Your School— Its Construction and Equipment

A Department Conducted by CHESTER HART, B.Arch., Chicago

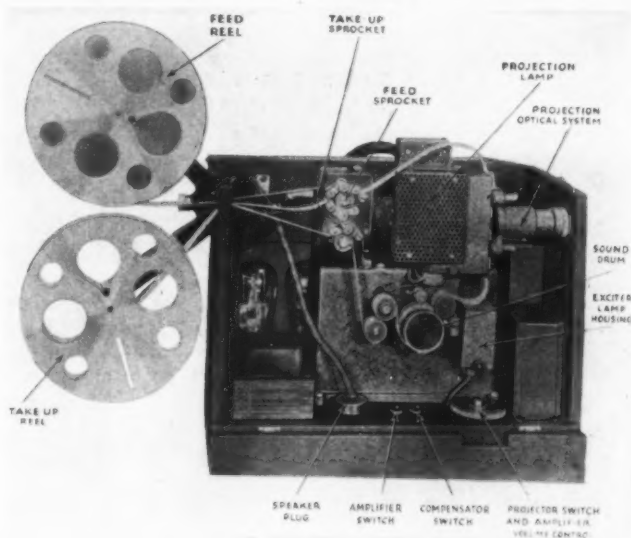
A Sound-on-Film 16m/m Motion Picture Projector

Motion picture film with the sound track as an integral part of the film has been recognized as the satisfactory method of "talkie" projection by the commercial theater. This sound-on-film type of reproduction can now be had in the 16 m/m size film that is used in classroom instruction. The RCA Photophone Junior, made by the RCA Victor Company, Inc., Camden, N. J., is designed to use this new film.

The Photophone Junior is portable equipment consisting of a projector-amplifier unit and a small loud speaker unit. The entire equipment is operated from any 110-volt, 50 or 60-cycle AC lighting circuit.

The projector-amplifier unit is 14½ inches long, 13¼ inches high, 8¼ inches wide and weighs 43

case which is 19 inches long, 16 inches high, 9½ inches wide and weighs 21 pounds, exclusive of films and reels. Space is provided here for the storage of eight film cans for 400-foot film reels. The loud speaker is of the flat baffle type with the dynamic speaker unit mounted behind the screened opening in front of the carrying case. A sufficient



Interior view of the Photophone sound-on-film 16 m/m projector unit.



The portable equipment, consisting of the projector-amplifier and the loud speaker.

pounds. This case contains the entire projection device consisting of motor, feed and take-up sprockets, 100-watt projection lamp and housing, 4-volt exciter lamp, sound drum, one photocell and six amplifying tubes. All power for the operation of the loud speaker is contained within the projector-amplifier unit.

The loud speaker is mounted in an individual

volume of sound is available to meet the requirements of rooms having a cubic content up to 10,000 feet.

The 16 m/m film employed for reproduction of sound pictures contains sprocket holes on one side only instead of on both sides. This leaves the other side free to receive the sound track, which is barely discernible to the naked eye. During projection the film reels are carried on brackets clamped to the rear of the projector unit. These brackets carry the standard 400-foot film, but special brackets are available that will allow a one hour showing without change of reels. During projection all moving parts except the reels are enclosed within the case to ensure the elimination of noise.

The optical system will project a picture as large as 67 inches wide and 50 inches high at a distance of 30 feet. The picture size recommended for good illumination is 52 inches wide by 39

CHARGING TRUCK DROP LEAF

A new and compact Charging Desk in portable form, especially convenient for the school library.

May be used advantageously at the side of the Librarian's desk or alone as a complete Charging Desk.

This truck can be easily moved from place to place with leaves either dropped or raised, yet it is adaptable for stationary use as a table, charging desk or card cabinet.

The center section contains five trays for 7.5 x 12.5 cm. (about 3 x 5 in.) cards, or six trays for 5 x 12.5 cm. (about 2 x 5 in.) cards. The capacity of these trays is about 10,000 light weight—or 8,000 medium weight 3 x 5 in. cards; 12,000 light weight—or 10,000 medium weight 2 x 5 in. cards with the necessary guides.

The cost is surprisingly low
—only \$49.75—freight paid.



**GAYLORD
BROS. INC.**

Library Furniture
and Supplies

SYRACUSE, N. Y.  STOCKTON, CALIF.

Dependable Signaling Systems

The name "Holtzer-Cabot" on any signaling equipment signifies the most dependable and efficient apparatus in the electrical field.

School
Fire Alarm Systems

School
Electrical Distribution Panels
and Equipment for
Science Laboratories

School
Program Bells, Buzzers and
Horns

School
Telephone Systems

An illustrated catalogue of all Holtzer-Cabot School Systems will be sent on request.

The Holtzer-Cabot Electric Co.

BOSTON

Offices in all

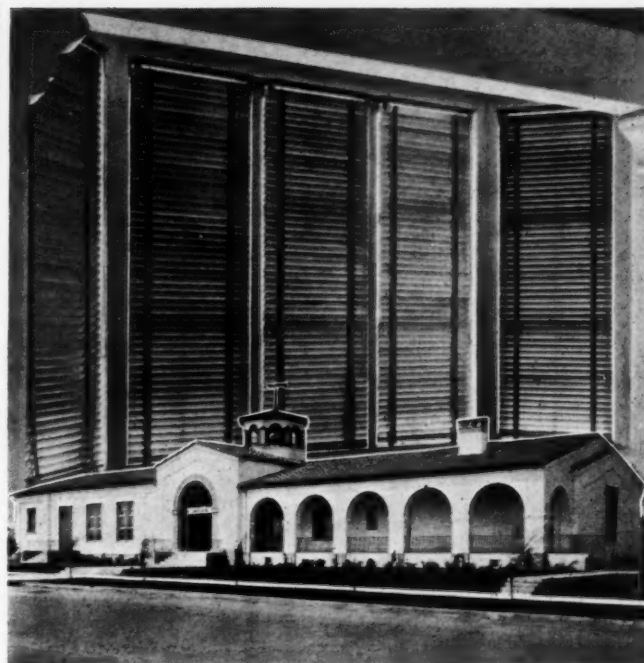


CHICAGO

Principal Cities

See Sweet's—Pages D6122-6165

PIONEER MANUFACTURER OF SCHOOL SIGNALING SYSTEMS



CONTROLLED DAYLIGHT

*is Vital to the Eyes
of Youth!*

REGARDLESS of how fine a building—how modern the method of teaching—the work and health of the students depend upon correct daylight illumination and ventilation.

That is why we say Western Venetian Blinds are kind to the eyes of youth. They eliminate glare on blackboards and desks. The controlled daylight of Western Venetian Blinds gives restful, diffused illumination and absolute control of ventilation at every desk—in every classroom corner.

Protect the eyes of youth. Install Western Venetian Blinds and secure Controlled Daylight—the ultimate in eye comfort for youth!

**Let us make this Photometric Test—
free of charge!**



Why not learn the scientific truth about illumination in your classroom? Our Photometric test is free for the asking. Sign the coupon and one of our Illumination Experts will be glad to make this test in your classrooms, free of charge, anywhere, any time.

WESTERN VENETIAN BLIND CO.

"World's Largest Exclusive Manufacturer of Venetian Blinds"
2700 Long Beach Avenue, Los Angeles, Calif.

111 West Jackson Blvd.
Chicago, Ill.



101 Park Avenue
New York City

SALES REPRESENTATIVES IN ALL MAJOR CITIES

WESTERN VENETIAN BLIND CO.
2700 Long Beach Ave., Los Angeles, Calif.

GENTLEMEN: We are interested in the Photometric Test. Also send one of your brochures, "Controlled Daylight Protects the Eyes of Youth," to—

SCHOOL.....

STREET.....

CITY.....

STATE.....

inches high. This size is obtained at a projection distance of 23 feet with the 100-watt lamp. Another model with a lamp of greater power for long distance projection is also available.

This same type of equipment is also available in a universal model, adapted for use with a suitable turntable, for the reproduction of sound-on-disc film as well as sound-on-film.

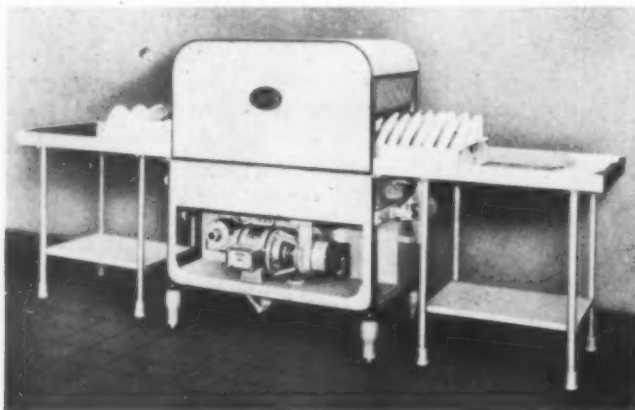
Records for the sound-on-disc films are now being made of flexible, unbreakable material. A further condensation has been made in the recording which allows the same length of sound track to be recorded on a ten inch disc as is contained on the larger records for use with 400-foot films.

Films for the new machine are being produced rapidly and a large library will be available.

Sponsored films may be obtained for school showing at the nominal cost of ten cents a film.

Innovations in Kitchen and Dishwashing Equipment

For the lunch room that has many dishes to wash and yet limited kitchen space, the small automatic dishwasher of simple design and construction is desirable. The Hobart-Crescent Model XM dishwasher, recently developed by The Hobart Manufacturing Company, Troy, Ohio, has the following

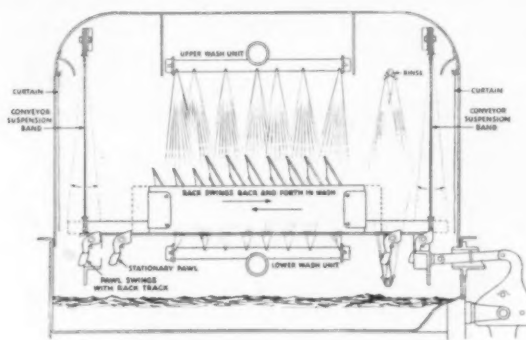


With the tables in place the dishwasher is ready for operation.

overall dimensions including connections, but not the tables—width 28 $\frac{1}{4}$ inches, length 55 $\frac{1}{2}$ inches, height 57 $\frac{1}{2}$ inches. The necessary connections are a $\frac{1}{2}$ -inch steam pipe, $\frac{3}{4}$ -inch rinse pipe, 2-inch drain pipe, and a $\frac{3}{4}$ -inch electrical box connection. Gas burners may be used but are not standard for this model. A $\frac{3}{4}$ -h. p. motor of splash-proof design is used for driving the pump and pawls. The pump has a capacity of 180 gallons per minute and has a removable end plate to permit easy cleaning.

There are flexible curtains at either end of the

hood and between the rinse and wash compartment which allow both operations to proceed as the racks move in and out. The machine is constructed of 12-gauge galvanized iron, 16-gauge monel metal or stainless steel. The wash manifolds cover the entire rack area both above and below. Unrestricted slot openings provide distribution and direct the streams at angles to reach all surfaces of the dishes. The double acting rinse arms above and below are operated automatically by the racks as they pass out of the washing compartment. An automatic overflow and an externally controlled drain valve regulate the height and amount of



Sectional view through the dishwasher.

liquid in the machine. Adjustable legs compensate for any unevenness in the floor.

The operation of the machine is simple, and the operator need only start the rack into the machine. The rack is then caught by the pawls and pushed on to the conveyor which swings back and forth in the washing stream. That either the dishes or the water must move during the washing process is said to be a cardinal principle of effectiveness. The second rack started into the machine pushes the first rack on to another set of pawls which in turn engage this rack, push it through the rinse spray

Speed and economy are incorporated in this new fry kettle, which is described on page 86.



and out of the machine. Should the racks become blocked, there is no danger of breakage by pressure from the pawls, because the operating lever automatically disengages from the motor connection.

The lightest 1000 watt sound-on-film projector ever made and A CHALLENGE to the world in the perfect reproduction of sound!

“I finished installation of West Kentucky Industrial College last week.

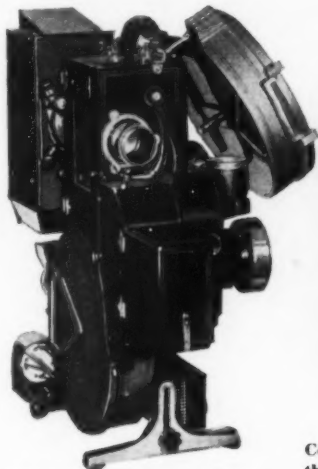
As to the equipment, I certainly want to take my hat off to any man who can design equipment that runs as smoothly and sounds as good as this does. It is 100% perfect.”

AMERICAN VISUAL SERVICE
C. H. Brandon

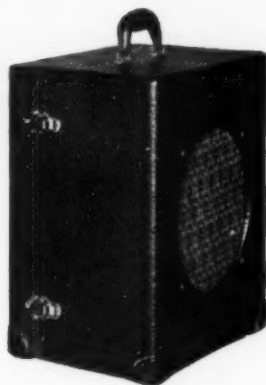
“Heard other portable sound equipments, up to more than double the price, and I must say, truthfully, that results with the HOLMES were so far superior that there is no comparison.

Dialogue clear and distinct, no muffled tones and one very noticeable feature, there was no rushing or roaring of sound reproduction.”

ELLIOTT FILM CO.
F. York Elliott



HOLMES Silent Projectors now in use can be equipped for sound-on-film at small cost.



Complete outfit—which includes everything for reproducing sound-on-film talking pictures, ready to run.

All weighing less than 90 Lbs.

HOLMES PROJECTOR COMPANY
1810 Orchard Street, Chicago, Ill.

Take the SQUINT out of Blackboard Reading



When you weigh blackboard value, consider its visibility . . . what happens when pupils read from it.

If its surface is shiny, if it reflects light, then such blackboard is dangerous for school use. Shiny, reflecting surface means that pupils can not see all of the writing all of the time, from any angle in the classroom. Writing fades, which causes *squint* . . . and *squint* is the forerunner of *eyestrain*, impaired vision and other serious ills. You protect pupils . . . facilitate successful teaching by specifying *Sterling Life'long Blackboard*. It is unlike other Blackboards, in that it positively will not shine, reflect light or fade out writing.

It has smoother writing qualities, too, with a surface that is free from irregularities, blemishes and imperfections. A sample, cut right from stock, gladly sent *free* to interested educators and school board members. Address Dept. S821.

WEBER COSTELLO CO.
Chicago Heights, Illinois



Makers of **STERLING, LIFE'LONG BLACKBOARD, OLD RELIABLE HYLOPLATE BLACKBOARD AND VELVASTONE BLACKBOARD**



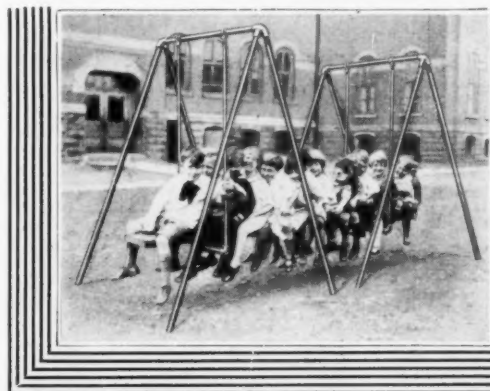
A
**Sensational
NEW
Wall Finish**

FROM 16% to 50% more surface covered per gallon of paint. An amazing ease of flow that cuts time and labor costs. A handsome finish . . . dirt and dust resistant . . . easy to wash . . . it substantially reduces maintenance and repainting expense. This, in a few words, is the economy story of the NEW BARRELED SUNLIGHT FLAT WALL FINISH.

Before you repaint, investigate the initial and long-run savings made possible by this sensational new flat finish. Write to U. S. Gutta Percha Paint Company, 47-H Dudley Street, Providence, R. I. (Branches or distributors in all principal cities.)

Barreled Sunlight FLAT WALL FINISH

Reg. U. S. Pat. Off.



SAFETY is a BIG Factor in the Selection of Playground Equipment

LOUDEN has guarded well the safety of "young America" in designing and manufacturing Loudon Playground Equipment! Every detail, down to the smallest bolt or fitting, is designed to prevent any possibility of mishap. When you choose Loudon Equipment you have the satisfaction of knowing that you have done your utmost to promote the safety, health, and happiness of the children. And at the NEW LOW PRICES, Loudon Equipment gives the biggest value the playground device dollar ever bought!



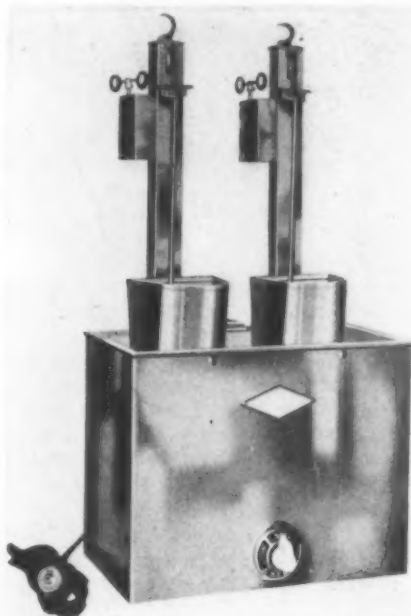
Write for the new Loudon Playground Equipment Book—just off the press. It's yours for the asking.

J. E. PORTER CORPORATION
110 BROADWAY OTTAWA, ILL.

With the obstruction removed, it is a simple operation to reset the machine. The operation of this machine has been so simplified that even the most inexperienced help will be able to operate it.

Speed and economy are incorporated into a new

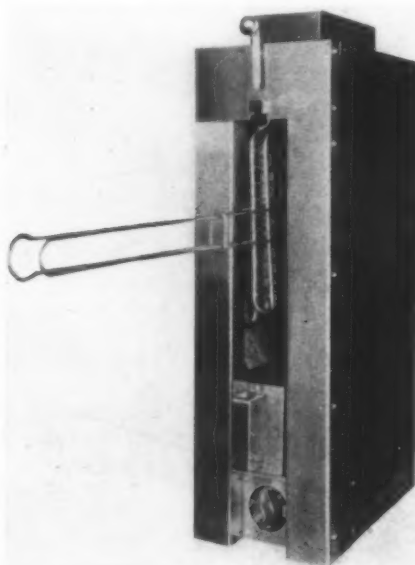
With heating units cast directly in the tank, this new egg boiler is both efficient and economical to operate.



fry kettle made by the Edison General Electric Appliance Co., Inc., 5600 West Taylor Street, Chicago. The kettle has an adjustable automatic temperature control that aids in obtaining the desired heat.

The proper frying temperature is maintained with a low consumption of electric current; yet a large reserve of heat that is automatically propor-

Proper broiling is made a simple operation when meat is cooked on this verticalelectric broiler.



tioned to the correct amount is always available to give fast service. The counter size and convenience of this kettle make it desirable where space is at a premium. Ease of cleaning and reduced power consumption lower operating cost.

Carelessness or oversight on the part of kitchen employees in allowing an egg boiler tank to boil dry cannot harm the new boiler made by the Edison General Electric Appliance Co., Inc. A thermostatic safety switch cuts off the current before damage can result and turns it on again when water is added to the tank.

To reduce the investment necessary to install this safety device, the boiler has been designed to use any standard type of timer post formerly used in gas, steam or electric boiler bodies.

The heating units have been cast directly in the tank, thus increasing the efficiency of the boiler, and reducing the wattage to 1,000 watts. It may be plugged in at any convenience outlet without special wiring.

A new electric vertical broiler, also made by the Edison General Electric Appliance Co., Inc., simultaneously sears both sides of steak or chops, thereby retaining all the meat juices and food value.

A quick loading and unloading grid, a high and low electric current and a special damper arrangement for regulating heat to give the best results for various types and thicknesses of meat make proper broiling a simple operation. Any drippings from the meats are caught in a removable pan.

Extremely small space is required in relation to the broiling area, and the individual units may be banked to give the required capacity.

A Water Saving Flush Valve Closet for School Use

A flush valve closet with a new type of bowl and valve, employing a new alternating principle of flushing and not requiring a special large service line, is being made by the Murdock Manufacturing & Supply Co., Cincinnati.

The Murdock Alternator Closet operates on $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch supply pipe, depending on the water pressure and length of pipe. In buildings with adequate mains and risers, a minimum for $\frac{3}{4}$ -inch pipe is 15 pounds water pressure at the valve with branches up to 35 feet long, and the minimum for $\frac{1}{2}$ -inch pipe is 30 pounds water pressure at the valve with branches up to 50 feet long. It is pointed out that operation is satisfactory if water is delivered at the rate of twelve or more gallons a minute, thus making it possible to use these smaller supply pipes. The flush has a swirling motion to cleanse the bowl, and only two and one-half gallons of water are used. The flush may be operated as frequently and as quickly as may be desired.